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CA Nips, Tucks Old Data Transformation Tools 5

Spotfire, Informatica: Metrics Moving Beyond QA .. 6

UML 2.0 Set For Summer Release 6

Alphora Offers .NET Data Access Alternative 8

Compuware Adds Analyzer Tool to DevPartner 8

Telelogic Enhances Synergy SCM System 9

Microtek Brings Out Low-Cost Installer 9



Conference Serves As Stage for New Platforms .. 10

Vendors Ratchet Up Tools Offerings 12

Sun Promotes Apache, J2EE App Verification 14

Sitraka Updates Tools, Components 15

Wireless Gets Busy 16

SourceForge Adds Support for Solaris 19

Ex-Stingray Execs Start Up NetEdge 22

New Middleware Helps Deploy Wireless Apps 24

Verano Brings Internet To Factory Floor 24

SPECIAL REPORT: Web Content Management

Going With the Flow 29

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Wall Street does not value tools companies, says Rogue Wave's Floisand.

ROGUE WAVE REBUILDS ITS LICENSING MODEL

New framework based on royalties

BY CHRISTINA M. PURPI AND DAVID RUBINSTEIN

Raising its aim from developers to higher-level enterprise managers in the hopes of finding profitability, Rogue Wave Software Inc. has shifted from a license model to a royalty-fee model for its SourcePro C++ development tool and has announced a new Object Systems Framework (OSF) for the creation of large-scale object systems.

It is the second major strategy announcement for the company (www.roguewave.com)

since last October, when then-CEO Jack Iacobucci resigned. At that time, the company said it was making itself over from a component vendor to providing infrastructure for Web services and XML data storage.

"Wall Street doesn't value tools companies," said new CEO John Floisand in discussing the latest move. "There's no lock-in on applications." Floisand explained that sales to developers is a "finite market. We looked to sell

development seats to C++ devel-

opers (now

Is Tool Enhancement Outshining Innovation?

Trend in embedded systems toward broadening existing product lines

BY EDWARD J. CORREIA

News from recent conferences indicates that embedded systems development tools vendors are leaning their efforts more toward porting existing products to new platforms and away from developing new tools.

"You may be on to something there," said Chris Lanfear, practice director of embedded systems software at Venture Development Corp. Lanfear, who

once considered development tools porting as the industry's backwater, said that is beginning to change. "Not too much seems to be happening today in terms of new tools, but target support for processors and OSes is going on to a significant degree."

One company keen to this movement is embedded systems developer TimeSys Corp. (www.timesys.com), which last year released ports and board support packages for more than 50 platforms. "We saw this trend some time ago and started investing heavily last summer," said TimeSys CEO Larry Weidman. Now a year

ONE for All As Sun Unifies Software Brand

HP: Sun struggles to walk line between Java shepherd, vendor

BY DAVID RUBINSTEIN

In a move that appears to mirror Microsoft Corp.'s use of the .NET brand to define its software offerings, Sun Microsystems Inc. two weeks ago swaddled its iPlanet, Forte and ChiliSoft product lines in the mantle of Sun Open Net Environment (Sun ONE).

The rebranding is part of a "very big push" by Sun to unify its software offerings that underlie the notion of Web services, according to director of product marketing Sanjay Sarathy. While Sarathy would not say how much money Sun is committing to its media campaign regarding the rebranding, he did call it "a very significant amount."

The tools that are coming under the Sun ONE brand are those used to create Web services, such as the Forte development tools (now

called Sun ONE Studio), or to deploy them, such as the iPlanet Web Server (now called Sun ONE Web Server), iPlanet Application Server (now called Sun ONE Application Server) and the ChiliSoft ASP porting tools (now called Sun ONE Active Server Pages), Sarathy said.

"We think the opportunity to simplify the brands was there," he said. "It shows the products are aligned behind one concept." Sarathy said Sun was "not really" playing catch-up with Microsoft in putting all its Web services tools under one banner, adding that Sun's capabilities "outstrip what customers are doing with

► continued on page 15

OLD & NEW



iPlanet Servers are now Sun ONE Servers

iPlanet Directory Server, Access Management Edition is now Sun ONE Identity Server

Forte Tools For Java is now Sun ONE Studio

ChiliSoft ASP is now Sun ONE Active Server Pages

BOWSTREET OPENS PLATFORM FOR WEB DEVELOPERS

BY ALAN ZEICHICK

In the past, Bowstreet Inc. focused its Factory dynamic applications assembly tool on automating the software development process: Where building a new Web app template might be difficult, the return on investment would come while building subsequent Web sites using the template. Now, the company claims that the fifth major release, which shipped in mid-April, addresses the ease-of-development problems by making it possible for customers, rather than Bowstreet's professional services consultants, to build these applications.

Factory consists of two parts: Designer, a development tool that can be used to construct Builders, the company's adaptive components; and a

into it, Weidman said he is seeing the economic benefits of the shift. "We are experiencing some great economies of scale and now are starting toward developing additional types of tools."



Companies are building on tools they already offer, according to VDC's Lanfear.

to VDC's Lanfear.

One possible exception is Applied Microsystems Corp., an embedded development tools maker that prides itself on being RTOS-independent.

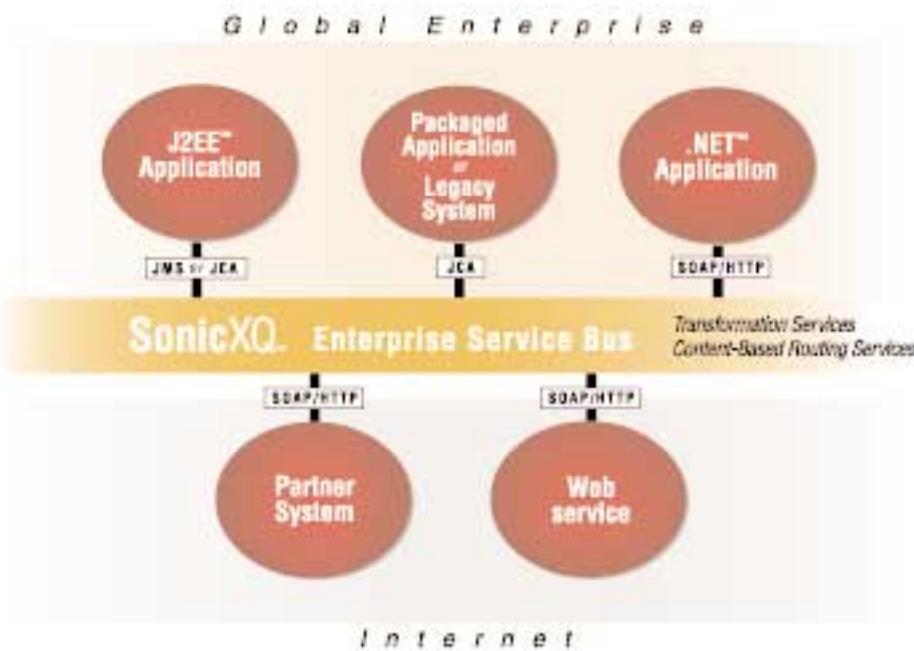
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CA Nips, Tucks Old Data Transformation Tools

Face-lift adds new graphical interface, workflow manager, repository integration

BY DAVID RUBINSTEIN

What was old is new again. Proving the truth of that old saw is Computer Associates International Inc., which has announced the availability of a pair of old data transformation and integration tools that have taken on a couple of new wrinkles, particularly in adding new graphical user interface tools and ease-of-use features.

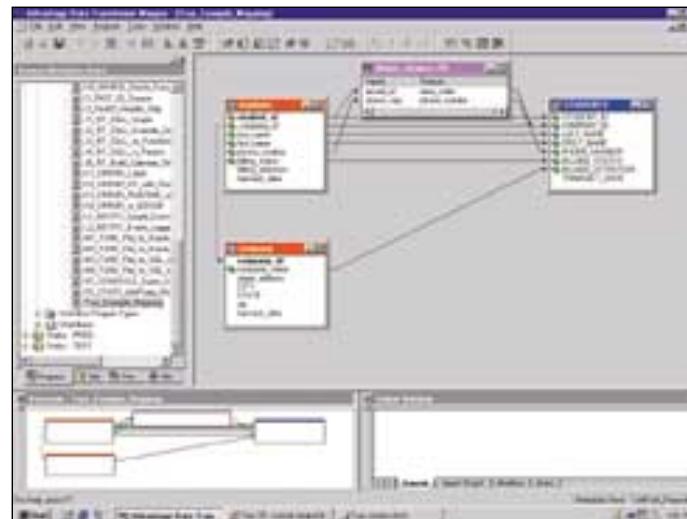
Advantage Data Transformer version 2.0 is actually an updated version of its old InfoPump version 3.3, acquired from Platinum Software, which acquired it from Trinsic Corp. Advantage Data Transformer Enterprise Meta-data Edition (DT EME) version 2.0 is an updated version of Platinum's DecisionBase Transformer, which was a bundle of InfoPump along with a graphical mapping tool. Now, Advantage DT also has the graphical mapping interface.

The new version, according to product manager Bentley

Barbour, "looks beyond the bounds of traditional extract-transform-load processes. It puts customer information where it needs to be, shared across regional offices or among trading partners."

Advantage DT differs from competitive data transformation tools by "bringing a robust graphical technology to mid-to low-end markets with a price point under \$50,000," claimed Allen Houpt, CA's brand manager for data warehousing solutions. The actual pricing is \$56,000 for the standard edition on a tiered-server pricing plan for an unlimited number of developers; DT EME sells for "just under \$100,000," he said.

Among the new features of Advantage DT is a graphical workflow manager, which Barbour said is not just a scheduler for data movement. "It's for almost anything people need as a process, whether it's database backup, [popu-



Advantage Data Transformer's graphical workflow manager enables organizations to complete complex systems integration.

lating] a table, [sending] an e-mail...." The tool now has the ability to cache data in memory, and offers single sign-on to integrate with other products, she added.

DT EME now offers the ability to launch CA's metadata repository, Advantage Repository Data Shopper, directly

from the transformation mapping utility, so users can receive the metadata relevant to the mapping being viewed, she explained. (The repository works only with Microsoft SQL Server, Oracle or Sybase, according to company literature.)

From inside the mapping environment, Barbour ex-

plained, you can drag tables onto the desktop and designate targets, so you're mapping columns directly to those targets. The tool also allows users to define transformations using new wizards; hundreds of defined transformations ship with the product, she added. The connectivity to the data stores are through native interfaces for the relational databases, she said, rather than going through a generic ODBC connection, which improves performance by directly invoking stored procedures, she said.

Barbour added the developers are given access to the script underlying the mappings, and a debugger is included in the DT EME mapper, which allows entrance into the code. Further, if the data is bad, it can be traced back to the source, she said.

General availability was expected at the end of last month. ■

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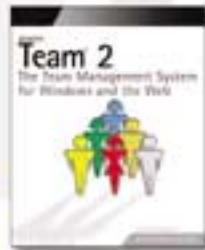
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News Briefs

COMPANIES

PointBase Inc. will be working with Motorola Inc. subsidiary **Metrowerks Inc.** to integrate PointBase's embedded Java databases into Metrowerks' CodeWarrior Wireless Studio development environment. . . . **PresenceWorks Inc.** has worked with **America Online Inc.** to allow developers to embed AOL Instant Messaging into an HTML application. The company also makes a variety of enterprise instant-messaging servers.

PRODUCTS

Thought Inc. has integrated its **CocoBase** object-relational mapping tool with Oracle Corp.'s **9i Application Server**. . . . **Ja.NET** is a new Java-to-.NET integration tool from Intrinsyc Software Inc. The utility allows applications running on J2EE-compliant app servers to communicate using Microsoft's .NET Remoting binary wire protocol. . . . AltoWeb Inc. will include an integration to Flashline.com Inc.'s **Component Manager Enterprise Edition** with its **AltoWeb application platform**, allowing development teams to access reusable Java assets and assemble them into applications. . . . Borland Software Corp. has created an integration for Mercury Interactive Corp.'s **LoadRunner** load-testing tool into the **JBuilder** Java IDE. The integration allows JBuilder users to automatically generate LoadRunner test scripts. . . . Metrowerks Inc. has released a version of its **CodeWarrior** embedded development tools for TI's DSP56800 digital signal processors. The IDE sells for \$1,195 per developer. . . . Versata Inc. has added a Web services and XML add-in to its **Versata Logic Server**, which instantiates business rules as EJBs. The software allows the server to consume and deploy XML-based Web services. . . . **BizLogic** is a new tool from Savvion Inc. that encapsulates process automation and management logic as a software component. The component is delivered as an EJB, and includes the ability to define, consume and publish Web services as part of process flows. . . . ComponentSource has released add-ins for Borland's JBuilder and IBM's WebSphere Studio Application Developer IDEs that provide automated access to its **Enterprise Reuse Solution** software-asset reuse system. . . . Savaje Technologies' **Savaje 1.1** embedded operating system has passed Sun's compatibility tests and is now J2SE compliant, according to the company, which also released a version of the product targeted at Java-enabled cell phones. . . . Sonic Software Corp. has begun shipping its **SonicXQ** middleware, which the company describes as an "enterprise service bus" for widely distributing messages using the J2EE Connector Architecture. SonicXQ is based on the company's SonicMQ message queue.

PEOPLE

Microsoft Corp. president and COO **Rick Belluzzo** has left the company only three years after joining from Silicon Graphics Inc. Microsoft does not intend to fill either position immediately. . . . Empirix Inc. has named **Edward Goldfinger** as its CFO; formerly he served as CFO of Sapient Corp. . . . Zucotto Wireless Inc., a company that builds embedded Java processors for mobile devices, has added Sun's **James Gosling** to its advisory board, and **Scott Fox**, chairman of the GSM Association, to its board of directors. . . . **Laura Unger**, former acting chairman of the U.S. Securities and Exchange Commission, has joined Borland Software Corp.'s board of directors.

STANDARDS

BEA Systems Inc. has submitted portions of its WebLogic Workshop J2EE application framework to the Java Community Process for approval. These will appear as **JSR-175**, a **Metadata Facility for the Java Programming Language**; the specification lead will be Sun, not BEA. . . . The W3C has released a working draft of its **Speech Synthesis Markup Language and Namespaces in XML 1.1** specs, and a last call working draft of its **Document Object Model Level 3 XPath** specification. . . . The Java Community Process has given final approval to **JSR-12, Java Data Objects**, which provides for interface-based definitions of data stores and transactions. ■

Metrics Moving Beyond QA

Businesses spread wealth of data via Web services

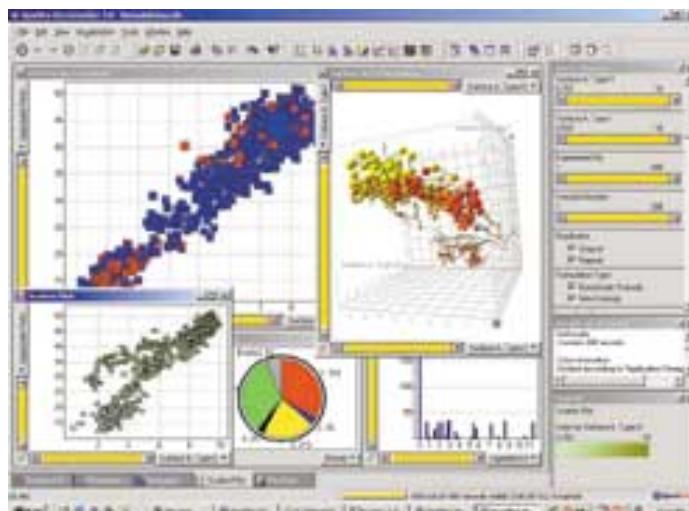
BY DAVID RUBINSTEIN

Two companies have recently brought to market solutions that ease the distribution of business analytics via the Web using Web services.

"From product manager to strategist to engineer, there are folks involved in delivering products and servicing companies who deal with a plethora of data they can't access in an analytic way," said David Butler, vice president of marketing at analytics solution provider Spotfire Inc. (www.spotfire.com). "It's about making the analytics process- and data-centric."

"There is a need to get information to the whole organization," said Girish Pancha, senior vice president at Informatica Corp. (www.informatica.com), a competing analytics firm. "Web services is one of the delivery mechanisms. It's a great fit for a pure thin-client solution."

Spotfire last month released DecisionSite 7.0, a tool for integrating data with analytics throughout a product lifecycle process, according to Butler. Web services standards, he claimed, provide a way to deliver the metrics that describe to businesses how they need to interact with their customers and how they should build their applications to achieve those goals. DecisionSite 7.0 includes a library of commonly used statistical routines for data analysis, Butler said. A separate product, DecisionSite Developer 7.0,



Spotfire's DecisionSite 7.0 ties analytics to business processes.

also recently released, is the tool set that allows users to configure the analytics tool specifically for that company's business processes.

Meanwhile, Informatica last month announced the latest release of its analytics delivery platform, which allows users to build Web-based metrics "dashboards" to gain access to key company metrics, according to Helen Dwight, Informatica's senior director of marketing for platform technology.

"The key is to deliver information anywhere the user might be," she said. Informatica's solution is built to J2EE specifications, and supports BEA's WebLogic and IBM's WebSphere application servers. "We can take advantage of the scalability, fault tolerance and 24x7 availability of the app server," she added.

Pancha said Informatica

provides developers and business managers a view into the integrated data, and that its analytics server can be embedded into J2EE-compliant portals to give users single sign-on access to the metrics and other key data. Because Informatica's solution is Web-based, users can basically deliver real-time analytic data to those who need it, either within or beyond the boundaries of the organization.

Informatica's analytics platform, version 3.1, is available now and sells for \$142,500 for an unlimited number of users.

Butler noted that customers could use the two solutions together, as he said the Informatica products are focused on real-time dashboard analytics while Spotfire provides "non-stop what-ifs" that explore the options upon which business decisions are made. ■

UML 2.0 Release Set for Summer

BY EDWARD J. CORREIA

Developers waiting for the next version of the Unified Modeling Language specification will need to wait a bit longer. According to a spokesperson for Object Management Group, the organization that oversees the specification, progress on UML 2.0 awaits a June meeting in Orlando, Fla., at which time technical members of the committee will review submissions on infrastructure and object constraint language specs that

had been revised following an April meeting in Japan.

Among the subjects on the table will be proposals to improve UML's architectural alignment with other OMG specifications, including Meta-Object Facility (MOF) and XML Metadata Interchange (XMI); to restructure the language to make it more understandable and easier to learn; and to add an extension mechanism. The superstructure of the language also will be scrutinized. This is

intended to enable modeling of structural patterns for component-based development and specification of runtime architectures, to clarify the semantics of generalization, dependency and association relationships, and to support behavioral modeling encapsulation and scalability for state machines and interactions.

The new specification is tentatively set for release in August, she said, when members will meet in Helsinki, Finland, for a vote. It has been reported in other media outlets that the update to the specification would be completed in April, but OMG's timetable was for the work to be completed in the summer. ■

The view from the top



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Alphora Offers .NET Data Access Alternative

BY ALAN ZEICHICK

Not content with Microsoft's Active Data Objects .NET approach to accessing databases from its .NET Framework, Alphora, a division of Softwise Inc., has released a tool set

that uses its own database abstraction scheme instead.

Dataphor, which entered beta last December, combines a data-access engine and a set of user-interface components to provide an environment for

rapidly developing data-centric applications. The tools became generally available in mid-April.

The company (www.alphora.com) refers to Dataphor's DAE—or Data Access Engine—as a "virtual RDBMS"

that .NET applications can access instead of using Microsoft's ADO.NET interfaces or direct ODBC connections to SQL-based relational databases from companies such as IBM and Oracle.

Alphora claims that the DAE is more responsive than working with the databases directly. Also, the company maintains that because developers write to the Dataphor-abstracted database, their applications are more portable than if they were written to a specific database.

The user-interface system, called the Dataphor Frontend, automatically generates an application's user interface based on the DAE's data dictionary, according to Alphora. The client UI is hosted by a Dataphor Frontend Server, and can be accessed via a browser, as a native application or via XML.

Dataphor is priced at \$5,000 per developer seat, with an introductory price of \$2,900 through October 2002. ■

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Compuware Adds Analyzer Tool To DevPartner

BY CHRISTINA M. PURPI

Compuware Corp. recently released DevPartner Studio version 6.7, which now includes a distributed analyzer.

The distributed analyzer, for Windows-based applications, looks at an application's transactions across a number of varied systems to help developers locate problems, according to Rob Straight, Compuware's (www.compuware.com) product manager for DevPartner products. "It takes a look at all components across all tiers in real time and collects useful information that the developer can use to determine if things are working as they should be, to help tune and optimize runtime performance," Straight said.

"The problem [this product solves]," Straight added, "is developers create fairly complicated applications and are faced with a challenge of getting separate components to all work together because you are developing different pieces that will be deployed on different platforms in the production environment. You can debug those components individually, but how do you debug the interactions between those components?"

DevPartner Studio 6.7 is available and priced at \$1,249 per seat license. ■

Telelogic Enhances Synergy Change Management System

BY CHRISTINA M. PURPI

Telelogic AB this week released ActiveCM, a new change and configuration management tool, as an add-on to its Synergy 6.2 change management system.

According to Tom Furukawa, product manager for the Synergy product line, ActiveCM watches what a developer does and corrects the change management operation while removing 90 percent of a developer's manual interaction with a change management system. ActiveCM resides on a client desktop and automatically checks the appropriate code files for any changes through an interface with the Synergy repository.

The problem, said Furukawa, is that developers don't want a change management system be-

cause it hinders their work by being difficult to deploy on all projects. Because all development tools are not integrated, there's a lot of human error and it's time-consuming, he said.

"ActiveCM keeps track of

developer changes, so a developer does not have to tell the change management system which files they're changing," said Furukawa.

Furukawa claimed that ActiveCM is the first automated

and transparent SCM solution on the market.

ActiveCM was scheduled to be released on April 30 and is priced based upon the number of users, in addition to the original Synergy costs, which are

\$25,000 for 10 users and \$95,000 for 50 users, according to the company (www.telelogic.com). For ActiveCM, one to 15 users would cost \$4,500 per server, up to 50 users would cost \$12,500, up to 100 users would cost \$20,000, and if the number of users exceeded 100, a \$150 per-client model would be used. ■

MICROTEK BRINGS OUT LOW-COST INSTALLER

BY ALAN ZEICHICK

A small company, Microtek Software, has entered the busy installer market with EzInstallware, a low-cost utility for Windows.

The tool, priced at \$97 per developer for a perpetual license, includes free updates and technical support forever, according to Hilton Moore, the company's founder and sole employee, who claims the utility targets all versions of Microsoft's desktop operating system from Windows 95 through Windows XP, and has the ability to make registry changes, run within Microsoft's Visual Studio .NET, and also scan the application's .exe file for dependencies.

The company (www.ezinstallware.com) launched in 1999 as an e-book publisher named Creative Online Solutions before changing its name and launching EzInstallware. Moore is taking an aggressive stance toward the competitive installer market, referring to Microtek as a leader in the software deployment solutions market and claiming that his product puts InstallShield Software Corp.'s more expensive InstallShield Express offering "to shame" in terms of ease of use.

Currently, the installer market is dominated by InstallShield, Wise Solutions Inc. and Zero G Software Inc. ■

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JavaOne Serves as Stage for New Platforms

BY ALAN ZEICHICK

SAN FRANCISCO — The seventh annual JavaOne conference may have had fewer exhibitors and attendees than it did in 2001, but the event still served as an important staging area for third-party product introductions and upgrades. While many of the offerings were in deployment platforms, there also were interesting product announcements building on the Java Data Objects and Web services specifications.

SERVER OFFERINGS

A new company, **LavaServers Inc.** (www.lavaservers.com), demonstrated a prerelease version of its J2EE app-server appliance of the same name. The server is a 1U (1.75-inch)-high rack-mountable server with a 1GHz Pentium III processor, 512MB RAM, a 40GB hard drive and a J2EE application server with JSP, servlet and EJB support. The base server is priced at \$2,499.

Sybase Inc. (www.sybase.com) is now offering a set of adapters for linking J2EE 1.3-compliant app servers with packaged applications in the ERP, CRM and supply-chain markets. It also released a message bridge adapter for Java, which converts XML DTDs to Java classes during application design. The adapters are supported on Sybase's EAserver, BEA's WebLogic and IBM's WebSphere app servers.

Pramati Technologies Ltd. (www.pramati.com) has shipped a version of its J2EE 1.3-compliant application server for Mac OS X running on Apple's G4 server. The software is priced at \$5,000 for a dual-processor server. The company also announced that its Pramati Studio 3.0 IDE can deploy applications directly onto Oracle's 9iAS app server.

Iona Technologies Inc. released version 5.1 of its Orbix E2A app server platform with support for J2EE 1.3, and version 5.1 of its XMLBus integration platform with a Web services designer, interface transformation engine and business process engine. The company (www.iona.com) also

demonstrated a security services framework for XML-based Web services.

A new release of **ObjectFX Corp.**'s SpatialFX platform—a J2EE app server specifically designed for the deployment of location-aware services—was pre-viewed by the company (www.objectfx.com), which says

that the new version, 3.2, will support all features of Sun's J2EE 1.3.1 reference implementation. No date was given for general availability of the new version.

Hewlett-Packard Co. announced version 2.0 of its Web services platform with Web services creation wizards, support for XML digital signatures and the ability to perform Web services transactions based on the OASIS organization's Business Transaction Protocol. As an add-on to the platform, HP released a new Process Manager Interactive Edition, which it calls an entry-level tool for the creation of Web services out of components, that the company says provides a graphical workflow environment for creating higher-level business processes from Web services. It is due out by June.

Another HP add-on is Web Services Transactions, which the company has released as a technology preview and claims is the industry's first transaction server for Web services. HP's application server version 8.2 was expected to be out in late



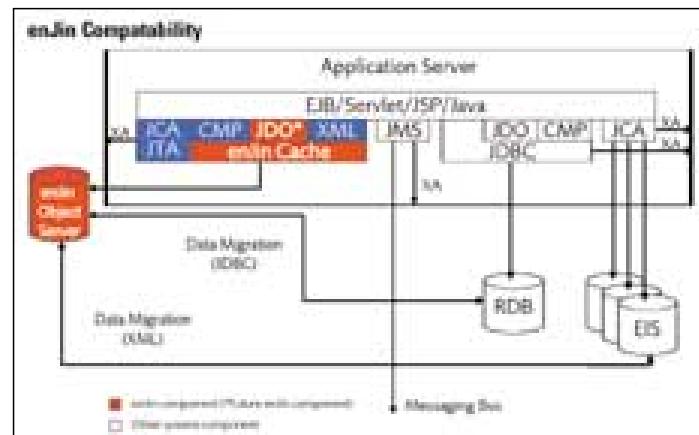
ObjectFX's SpatialFX 3.2 supports Sun's J2EE 1.3.1 reference implementation.

April with support for J2EE 1.3. The app server is free, while the Web services platform costs \$1,000 per processor. The process manager and transaction server each will sell for \$5,000 per processor. The Web Services Transaction libraries, without the Coordinator management piece, are free.

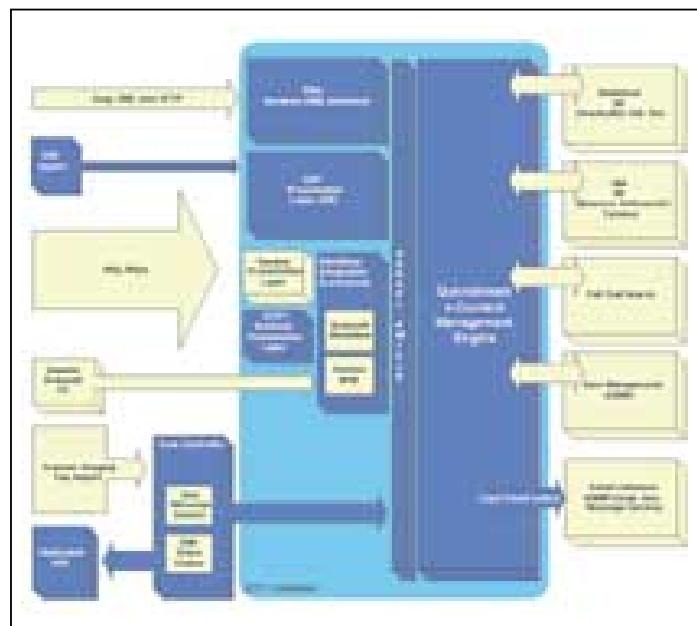
Document management system provider **Quickstream Software Inc.** (www.quickstream.com) released to beta version 4.0 of its Quickstream application, which now can reside in an EJB container inside a J2EE-compliant app server. "Now the front end and back end are doing in-memory calls, which is a lot faster. We believe we're the first with this," said founder and chief technology officer Eric Westerkamp. "Our JSP front end can be retooled to look like any other Web page you like. You can simply take a piece out and plug it into an existing JSP."

Other new features of Quickstream include support for XML databases from NeoCore, Software AG and XYZFind, automated import of documents, the ability to replicate documents out to other applications, and enhanced imaging capability. Also, as an add-on, Quickstream is making available a rules engine driven by an XML scripted schema for the sorting and handling of documents.

"You don't have to predefine metadata to store documents into the system," Westerkamp said. "You can associate schemas with folders later on."



Versant's next release of enJin will comply with Sun's JDO specification.



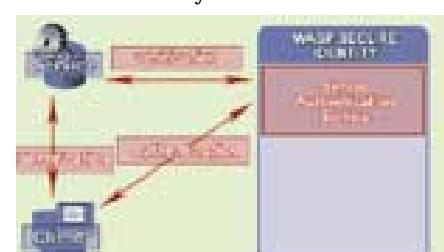
Quickstream's e-content management application now can reside in an EJB container, speeding the process of presenting documents.

JAVA DATA OBJECTS

ObjectFrontier Inc. (www.objectfrontier.com) released a Java Data Objects (JDO) version of its FrontierSuite development environment, which also includes a JCA-compliant persistence engine. The JDO implementation provides persistence for JDO classes and allows any JDBC-compliant relational database to be used as the data store.

Versant Corp. (www.versant.com) has announced that by July it will release a beta of its enJin persistent cache for J2EE application servers that will be compliant with the JDO specification. General availability is expected by the end of this year.

In addition, several Java vendors have teamed to create a Web site for the promotion of the JDO specification. Participants in the new www.jdocentral.com site include Libelis, Poet Software Corp., PrismTech Ltd., SolarMetric Inc., Sun Microsystems Inc. and Versant.



Systinet's WASP Secure Identity authentication service can be implemented as a Web service.

WEB SERVICES

Web services infrastructure software provider **Systinet Inc.** (www.systinet.com) released WASP Secure Identity, a single sign-on authentication service that is implemented as a Web service and can be integrated with any existing authentication

authority, the company claims. The security token within WASP Secure Identity is formatted using the Security Assertions Markup Language, an OASIS specification for exchanging security information. Also, Systinet released its WASP Web services development platform for the Eclipse open-source framework.

The availability of a UDDI registry and two new products to enable visual application integration was announced by **IBM Corp.** The UDDI registry is based on IBM's public UDDI node and is free for WebSphere application server users. The new developer tools are WebSphere Studio v.4.1 Integration Edition, which provides richer functionality around Java Connec-

tor Architecture, adapters for numerous platforms and legacy systems, and a GUI-based environment to define a data integration or business rule bean. Integration Edition costs \$5,999. ■

David Rubenstein contributed to this story.

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Vendors Ratchet Up Tools Offerings

BY ALAN ZEICHICK

SAN FRANCISCO — At the JavaOne conference held here, nearly as much attention was paid to new and improved development tools as to deployment platforms, with offerings ranging from IDEs and plugins to debuggers and performance analyzers.

TogetherSoft Corp. (www.togethersoft.com) has entered into an agreement with **Sun Professional Services**—Sun Microsystems Inc.'s consulting arm—that will allow Sun Services to provide its customers with the Together ControlCenter development environment. Also, **Serena Software Inc.** (www.serena.com) is integrating its ChangeMan DS software change management tool and Change-Man WCM code and content manager with Together ControlCenter. ChangeMan DS also will support Sun's Forte for Java IDE.

InCert Software Corp. (www.incert.com) announced the general availability of its Halo debugging tool for the J2EE platform, engineered to provide a code-level diagnosis of errors in EJBs, JSPs and servlets as well as other Java code. Halo, the company claims, can pinpoint the failure from within a heterogeneous environment and deliver a code trace of that error. Also, Halo's TraceBack defect tracker can plug into Sun's Forte for Java IDE.

With the version 2.0 release of its Indepth for J2EE performance management solution, **Precise Software Solutions Ltd.** (www.precise.com) has introduced SmarTune, a component the company says can drill down into J2EE production applications to isolate performance problems, analyze them and give advice to correct them. SmarTune, according to senior product marketing manager Tom Mulvehill, can simulate changes and make recommendations, and can simulate the effect those changes will have. "The solution sets available today are too obtrusive," he said. "Applications work well in development but fail under load because the tools introduce too much overhead under load." A version of Indepth for J2EE for IBM's WebSphere was announced at JavaOne; there

also are versions for BEA's WebLogic and Macromedia's JRun application servers.

Rational Software Corp. unveiled a tool, called CodePro Migrator, designed to help **IBM Corp.**'s VisualAge for Java developers move to IBM's WebSphere Studio—by moving their software assets into Rational's ClearCase source-code and version-control system.

Stellent Inc. has updated its Outside In XML Export utility, which provides XML-based access to unstructured documents. The version 2.2 product now includes Stellent's own XML schema, called SearchML, that is designed to provide information indexing and knowledge management; the tool converts a document's structure to either the SearchML schema or Flexion-Doc, another schema included with the product. Developers now also can use either C or Java APIs to work with the tool (www.outsideinsdk.com).

LegacyJ Corp. has updated its ViewJ utility for users of HP's MPE/ix-based e3000 mini-computers. ViewJ migrates COBOL applications, written in HP's VPlus screen format, to be run within a JVM. The new 3.0 release allows for programmatic access by LegacyJ's PERCobol compiler, which can recompile the e3000's original COBOL II applications to also run within a JVM. In addition, the company (www.legacyj.com) has released version 3.0 of the PERCobol compiler. The new version uses IBM's Eclipse IDE, and now offers better compliance with

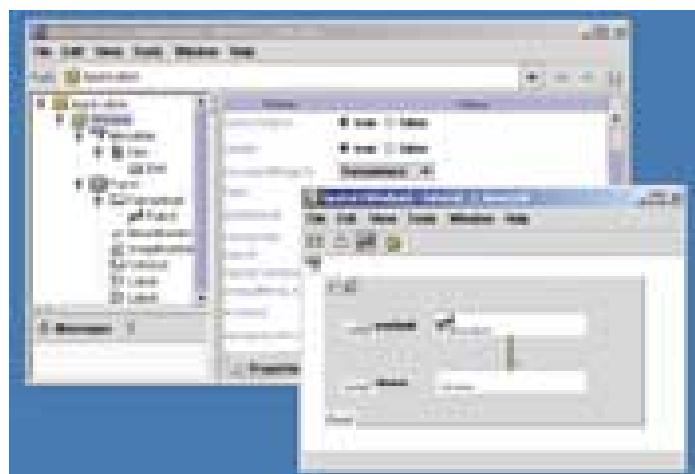
the COBOL 2002 language standard and SSL2-based secure transactions.

Adding to its set of Java development tools, **Borland Software Corp.** has released its recently acquired Optimizeit Suite for Java, which includes a profiler, thread debugger and code-coverage analyzer. The company also unveiled Jdata-Store, a database engine written in Java, which can be integrated with embedded and mobile applications built using Borland's JBuilder IDE.

A new company, **Prophecy International Pty. Ltd.**, launched its application-assembly tool at the conference. Velatte (www.velatte.com) combines a visual modeler to allow developers to link reusable software components, while an integrated XML repository stores business entities, processes and rules. Applications then run on a J2EE application server.

Wily Technology Inc. (www.wilytech.com) announced the third major release of its performance management application. Introscope 3.0 now can monitor applications running on BEA's WebLogic or IBM's WebSphere application servers, and also has extensions designed to view the performance of transaction servers, databases and Java connectors. Systems managers can communicate with Introscope using SNMP messages from such platforms as HP's OpenView or IBM's Tivoli TME.

A new tool from software configuration management vendor **McCabe & Associates Inc.** (www.mccabe.com), Re-



Tekadence Magik's spatial editor provides patches, modifiers, compound objects and scripting for creating Java applications.

lease Rocket Verify 1.0, can track changes between versions of application code and test those changes. "It's the first product focused specifically on changes. It's not for testing everything every time," said Mike Smith, McCabe's vice president of product marketing. Pricing starts at \$9,995 for five concurrent users, according to the company.

Internet Access Methods Inc. (www.iamethods.com) unveiled IAM Developing Java Edition, a new IDE that the company claims is designed for real-time collaborative development over the Internet. The product uses screen-sharing techniques to let developers work on the same files at the same time, as well as view the output from compilers or test runs. Collaboration using the IDE requires that developers sign up for a service hosted by IAM, as well as purchase a copy of the tool for each developer.

Oracle Corp. used JavaOne to launch its SafeSwitch Migration Kit, designed to help move applications from BEA's WebLogic app server to Oracle's 9iAS. The tool is offered free to customers who purchase 9iAS. Oracle also lowered the price of its JDeveloper IDE to \$995 per seat, and released development kits for portals and J2ME applications.

VisiComp Inc. (www.visicomp.com) has released a new Java application debugging tool, called RetroVue. The debugger contains a repository that stores every operation performed by the program since the beginning of execution, allowing developers to search backward in time to find when

problems occurred, and then view the state of the entire application at that time, including threads, locks, objects, references and variables.

California start-up company **Tekadence Inc.** (www.tekadence.com) has sent to beta a new authoring tool called Tekadence Magik that allows for the creation of Java applications without the need to be able to write source code, according to company CTO Sean Allen. "You don't see source code while you're using [Magik], but the published output is a Java application or JAR file, which may optionally use Java Web Start." Allen said the product is ideal for development teams that may have only one Java programmer and a number of Web designers. By dragging and dropping user interface elements as well as Web services, rich media and Java JAR or class files into a spatial editor for patching or scripting, it becomes easy to create fully functional Java applications, Allen said. Since the user is working with precompiled Java code components, an instant preview can be seen of how the application runs before it is deployed, he added.

ParaSoft Corp. (www.parasoft.com) announced updates to Jtest, its regression-testing tool. Jtest 4.5 now supports JavaServer Pages, can automatically generate test classes, and can be integrated into IBM's WebSphere Studio Application Developer, Sun's Forte for Java and TogetherSoft's Together ControlCenter IDEs. ■

David Rubinstein contributed to this story.



Wily Technology's Introscope now can monitor applications running on WebLogic or WebSphere servers.

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Sun Promotes Apache, J2EE App Verification

BY ALAN ZEICHICK

SAN FRANCISCO — Despite several keynotes by top Sun Microsystems Inc. execs, attendees at the JavaOne conference didn't see much evidence of a

particular vision for the Java platform, other than continuing momentum for the J2EE server platform and for J2ME-based handheld devices, and changes to the Java Community Process

to accommodate the Apache Software Foundation and other open-source developers.

Arguably the most talked about announcement was Sun's new J2EE Application Verifica-

tion Kit (AVK), a tool for analyzing Java applications to see if they contain platform-specific extensions. It also looks for some violations of the J2EE 1.3 specification. The test kit is cur-

rently in beta, and can be used only by organizations that Sun believes meet criteria for joining the beta program (<http://java.sun.com/j2ee/avk>). Sun has not committed to a general release date for the AVK, or indicated whether there will be a charge for the software.

Sun also announced an update to its ChiliSoft ASP software (www.chilisoft.com), which allows non-Microsoft Web servers to run dynamic applications built for Microsoft's Active Server Pages specification. The new ChiliSoft ASP 3.6.2 lets developers access Java classes from ASP scripts, and includes a new set of high-speed ODBC drivers from DataDirect Technologies.

Also in the tools department, Sun released a J2ME-specific version of its integrated development environment. The Forte for Java 4 Mobile Edition, built on Sun's NetBeans open-source IDE framework, will be offered at no charge from www.sun.com/forte/ffj. In addition, the company released an update to its J2EE IDE; Forte for Java 4 Enterprise Edition now can work with Web services and Enterprise JavaBeans.

Also on the embedded front, Sun released two new JVMs for J2ME. One, which Sun calls "Project Monty," is for the Connected Limited Device Configuration (CLDC) version of the J2ME spec; the other, which lacks an interesting code name, is for the Connected Device Configuration (CDC) version. Sun claims that these JVMs, which are written for the ARM processor and Symbian operating system, are 10 times faster than competing small-footprint JVMs.

In the iPlanet product line, Sun now is offering an XML adapter toolkit and WSDL support for the iPlanet Integration Server, and J2EE Connector Architecture support for its iPlanet Portal Server.

Within the JCP, Sun initiated Java Service Request 168 to create a uniform portal API specification for J2EE app servers, and JSR-172 to extend XML, SOAP, UDDI and ebXML to handheld devices built on the J2ME specification. Currently, the JCP's Web services specifications apply only to J2EE. Sun predicts that the specification will be completed by mid-2003. ■



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Sitraka Updates Java Tools, Components

BY ALAN ZEICHICK

At JavaOne, test-tool vendor Sitraka Inc. released version 4.0 of JProbe, its modeling and testing tool. Features include new application server and IDE integration tools, an

Instance Memory calculator that determines the size of memory leaks, support for J2SE 1.4, and heap snapshot differencing, which allows for the measurement of application changes as related

to memory usage.

In addition, the company has updated its JClass Enterprise Suite set of Java GUI components to be compatible with the J2SE 1.4 SDK. Now called JClass Views 6.0, the compo-

nents incorporate 2D and 3D charting, tables, grids, data input validation and reporting.

Sitraka (www.sitraka.com) also introduced a set of Java-Server Pages-compliant server-side charting components. ■

SUN ONE

◀ continued from page 1

Web services today, so we don't think it's a question of catching up." Other companies, among them HP, IBM, Iona and SilverStream, also have put their Web services tools under one all-encompassing brand.

However, for Sun, the difference remains that the company wears both the robes of Java platform shepherd and the seersucker suit of a software vendor. "They're in a pickle trying to figure out how to be different than Microsoft and still get into the software game," said Robert Bickel, general manager of Hewlett-Packard Co.'s middleware division. "The feeling I got from Sun at JavaOne is that they were saying .NET isn't real...but [for Sun] to deny it isn't a credible story," he added.

Bickel, meanwhile, denied reports in the media quoting Alfred Cheung, chairman of HP partner BEA Systems Inc., as telling Merrill Lynch that HP "scuttled Bluestone" and was giving up on its since-renamed Netaction application server to adopt BEA's WebLogic and save millions in costs. "We're keeping our own middleware," Bickel said. "We're trying to enable pervasiveness of application servers. There are customers for whom spending that kind of money for [large WebLogic] installations doesn't make sense. Perhaps they're deploying on Apache Tomcat and want to get into Web services; we help them do that." Bickel also said that HP looks to bridge the .NET and Java worlds to have true interoperability, and added that HP was a founding member of the Web Services Interoperability Organization.

"Sun is feeling its power going away," Bickel said. "They're trying to cling to it with Java...but the [programming] languages are becoming less important than the Web services. I'm hearing a lot about .NET development, but not as much about people being C# developers." ■

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Wireless Vendors Get Busy at JavaOne

Plentiful development tools aimed at building over-the-air devices, applications

BY EDWARD J. CORREIA

As the devices people carry around grow smaller, the languages and development tools

are sure to follow. This year's JavaOne conference in San Francisco in March was a case in point, as the touting of tools

and technologies aimed at wireless development was a recurring theme.

Software tools maker Metro-

werks Inc. (www.metrowerks.com), a subsidiary of Motorola Inc., has teamed up with business software developer

Agea Corp. (www.agea.com) to create CodeWarrior Wireless Enterprise Studio, an IDE that combines the Metrowerks development tools with Agea's Java and XML middleware for extending enterprise applications to J2ME-enabled devices.



The components include those for authentication, notification and messaging; and session, user, device and event management. The suite, which was scheduled for release in April, will be priced at \$5,000 and will include a five-user license of Agea's Business Acceleration Suite, a J2EE application server, PointBase's Java SQL server, an HTTP server and JMS.

Personal communications device maker **Research in Motion Ltd.** has released the BlackBerry Development Environment for J2ME, an IDE with device and network simulators that it says permits enterprise applications to be extended to the company's line of always-on wireless handheld computers and communications devices. The IDE is free for members of its development community (www.blackberry.net/developers).

Gemplus SA (www.gemplus.com), which manufactures smart card readers and related hardware and software, has released GemXpresso RAD III, a Java card development kit that the company says includes everything needed to design and develop Java Card 2.1-compliant smart card applications. The kit reportedly includes a smart card reader, a supply of smart cards and an IDE for Linux, Solaris and Windows development hosts. The tools also reportedly can plug into Borland's JBuilder and WebGain's VisualCafé.

For developers looking to access J2SE libraries in small form-factor devices, Java developer **SavaJe Technologies** (www.savaje.com) was demonstrating SavaJe OS Smart Phone Edition, a version of its operating system and application suite. Scheduled for

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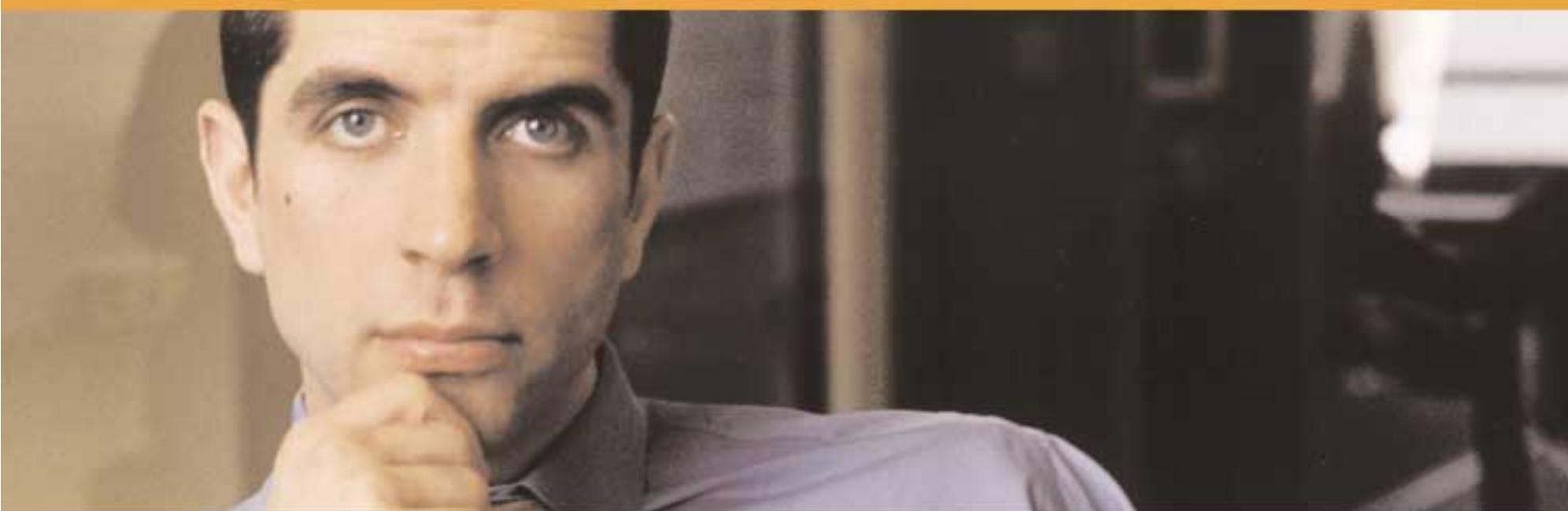
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> continued on page 18

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WIRELESS

◀ continued from page 16

release later this year, the operating system will include Java messaging and security, browser and personal information manager applications, and support for MP3 and MPEG4 playback.

Java developer **Kada Systems Inc.** (www.kadasystems.com) has released Mobile Ready to Optimize Implementations for Windows 2000, an application framework that combines its Kada Mobile Platform cleanroom VM and MIDP and Foundation Profile APIs with development services and

support. The company also released a beta version for Palm OS, and is working on versions for Cisco's VoIP embedded platform, Linux, Microsoft's Pocket PC and Texas Instruments' TCS2100/Riveria GPRS chip set.

Fourbit Group Inc. (www.fourbit.com), which develops

thin-client enterprise software, released MicroFablet, a version of its Fablet that now can be used to target J2ME devices. According to the company, Fablet is a task-based method of application development that it claims permits developers to extend their enterprise applications to thin



Fourbit's MicroFablet boils apps down to run on J2ME devices.

clients and mobile devices without the need for client-side program code. The system employs an XML-based rendering of the server application that gets deployed to the client and serves as the application interface.

Mobile middleware developer **Ellipsus Systems Inc.** (www.ellipsis.com) has launched the Provisioning Outreach Program, a free wireless application testing service that developers can use to test and certify their apps on various carrier networks and target devices. For developers whose applications pass certification, the company offers a fee-based co-marketing forum for displaying their apps to wireless carriers for potential licensing to their customers. Pricing for the co-marketing program is determined on a case-by-case basis.

Thought Inc. (www.thoughtinc.com) has released CocoBase Micro, a version of its object-to-relational mapping software for J2ME and MIDP that the company claims now permits developers to use a single mapping tool to build object-to-relational maps for J2EE, J2SE and J2ME applications. CocoBase costs \$6,000 per developer seat, with no royalties or runtime fees.

Sun Microsystems Inc. has launched wireless.java.sun.com, a new Web portal designed specifically for developers using Java to build wireless solutions. The site includes sample code, a bug database, wireless news, documentation and training materials, and a tools download area. Internally, the site will combine developer resources from Sun's Java developer connection and java.sun.com Web sites. ■

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SourceForge Adds Support for Solaris

BY CHRISTINA M. PURPI

VA Software Corp. this month will release a new version of SourceForge, its collaborative software development platform, to add the ability to run on Sun Microsystems Inc.'s Solaris operating system and SPARC processor, as well as new integrations with Rational Software Corp.'s ClearCase and Perforce Software Inc.'s P4 code-management tools.

Prior to the release of Enterprise Edition 3.1, SourceForge was able to run only on Red Hat Linux on Intel processors, according to Dan Bressler, director of product marketing. The integrations with the two tools allow SourceForge developers to manage changes to their code, he explained.

In addition to these updates, administrative enhancements

COMPONENTONE OFFERS ASP.NET SUBSCRIPTION

BY ALAN ZEICHICK

Windows component vendor ComponentOne LLC, which moved last year to a suite model with subscription pricing for new .NET components, has introduced an ASP.NET version of its .NET component suite.

The five first components in the ComponentOne Studio for ASP.NET are a Web grid, a server-side charting control, a database reporting control, a set of menus and toolbars, and a payment-processing link to the PayPal service. The annual suite subscription is \$1,599, and availability is promised by September. The company is offering discounted upgrades and introductory pricing. The annual subscription provides quarterly updates and new components, as well as technical support. Deployment subscriptions for the ASP.NET components will be priced separately, on a per-processor basis.

The PayPal component, called PayPal eCommerce for ASP.NET, will allow developers to incorporate credit-card payments into applications, according to the company (www.componentone.com). That component is currently available for free download from the ComponentOne Web site. ■

were made; among them, the reporting and monitoring abilities within SourceForge were expanded, giving managers the ability to configure, automatically schedule and export reports. Additional enhance-

ments were made to role-based access control privileges, project templates and bug trackers. "It's all about streamlining the process that development managers go through to set up a project, configure a project,

enforce workflow and internal process and gain visibility through reporting, all during the actual process of development," said Bressler.

The price for version 3.1 remains \$1,050 for a term license

per user per year, and \$2,625 for a perpetual license per user. There is a 20 percent per year fee for support and maintenance with the perpetual license, according to the company (www.vasoftware.com). ■

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ROGUE WAVE

◀ continued from page 1

opers. But we came to realize we'd have no business left after we sold to everyone."

Floisand said that by moving to a royalty model, the company will be more closely tied to its customers' successes. As applications are deployed to second and third servers, Rogue Wave will begin to see a compounding of fees that should outstrip what the company has made licensing developer seats, he said. In fact, Floisand said 74 percent of the company's second-quarter revenues were from royalty fees while the remainder was from seat licenses.

Even so, the company failed to make money in the quarter, posting a net loss of \$484,000, or 5 cents per share, as compared with a net loss of \$653,000, or 3 cents per share, for the same period last year. "We've been stagnant. We have not turned profitability," said Floisand. As of press time, Rogue Wave's stock price was at \$3.35, and its market capitalization was at \$37.1 million.

Compounded by the reduction of 10 percent of its U.S. work force, it would appear Floisand's expectation of achieving profitability by September is a lofty one, yet he remains optimistic. So does the board of directors; when company

founder Thomas Keffner retired from his position as chairman effective May 1, he named Floisand to succeed him. Perhaps more than anything, it is the OSF, and what can be built atop it, that has Floisand so excited.

The first application to be built was a global reference database, called GMRD, for the financial industry, and was created in conjunction with and for use by JP Morgan Chase, Floisand said. The goal was to create a way for securities traders to meet an upcoming industry requirement of reconciling all trades within 24 hours; currently some companies take as long as several days. By providing traders with a database that stores prices at the time of trade, it reduces their need to maintain large back-end support staffs and to float huge sums of money, he said.

Floisand said the installation is valued at between \$8 million and \$10 million. "If we install six or eight in a year, our company will double in size," he said.

"We've moved up the value chain, selling to a completely different group of people," Floisand continued. "Before we were selling to developers sitting on a bench writing code. Now we're selling to CIOs and CEOs that have the ability to make these large decisions that will impact all departments in the company."

Rogue Wave also will be focusing more of its sales efforts overseas rather than in the United States. "IT department budgets are frozen [in the U.S.]," Floisand noted. "That's not the case outside the U.S."

Technology analysts remain skeptical that this latest move can position the company toward growth and profitability. According to Wayne Kernochan, managing vice president of platform infrastructure at Aberdeen Group, Rogue Wave's old strategy was not producing any great

returns. "They were never going to be large in revenues. At some point you worry about your installed base getting too old and gray." He explained that [Rogue Wave's] new strategy, which admittedly he had not been briefed on by the company, seems like it is driving toward "how do we get out of this, kind of like the 'prisoners of paradise syndrome'; you're in a nice spot, but you knew it was going to go away."

Rita Knox, an analyst at Gartner Inc., said that Rogue Wave is "taking a big risk [with

the new strategy], but it seems to be more appealing to clients because it minimizes their risk."

Floisand claimed that Rogue Wave next month will release the next version of SourcePro, which includes the latest GUI interfaces for Microsoft XP. He said the tool remains an important cog in the company's plans and expects to derive \$40 million to \$50 million in revenue from this product alone this year. "There are still levels of code on top of OSF that customers must provide," he said. ■

Ex-Stingray Execs Start Up NetEdge

BY CHRISTINA M. PURPI

Eleven months ago, the Stingray division of Rogue Wave Software Inc. was cut loose and its employees laid off. Since then, the former management team at Stingray has gone in a new direction with a company called NetEdge Software Inc., which has released its first product, NetEdge Web Services Enabler, into beta.

According to the company (www.netedgesoftware.com), Enabler lets applications built using Microsoft's Visual Studio 6 IDE consume Web services. "With [Microsoft's] .NET just released, we wanted to build something that would work with .NET and Web services but wasn't exclusive to .NET," said

Jay Pitzer, co-founder and vice president of sales and marketing. "Enabler is compliant with the WSDL [Web Services Description Language] standard for Web services, so we can consume any Web service," he said.

"We took the OLE DB specification and built our own OLE DB provider for XML and Web services so it links old technology and new technology," Pitzer said. In other words, it allows a developer to change the connection string to point the data-bound elements to a Web services URL.

Because .NET is so new, Pitzer explained, "we built a product that allowed new XML-based Web services to be consumed by legacy or non-

.NET applications. It makes it easy for hundreds of thousands of desktop applications to be Web-service enabled."

Pitzer said that they didn't want to force everyone to upgrade their client applications just to take advantage of a Web service. "Enabler allows developers to change the connection string, build new Web services, and will then allow you to consume that into your existing desktop application with little change to the app."

According to Pitzer, "There are no other products like this out there." Enabler is scheduled to be generally available this month. It is priced at \$799 per developer product license; there is no runtime fee. ■

BOWSTREET

◀ continued from page 1

runtime environment that sits atop a J2EE-compliant application server running the Builders. The benefit to the system, according to Bowstreet, is that multiple Web sites can be based on the same set of Builders—and modifying the Builder template will result in dynamic changes to all the Web sites based on it.

"The focus for the [Factory 5] release is delivering highly adaptive Web applications," explained Dave Rosenlund, vice president of marketing. "We do that through the Builders. Builders are virtual programming; they are software objects that can build component-based application software the way an engineer would normally build that component-based software. You construct those Builders with Designer, which you plug into your IDE, and it allows you to capture the process of building a compo-

nent of software. Once you've built a Builder, you can use that Builder to build variations of that software component by changing the parameters that drive the Builder."

In Bowstreet's lingo, said Rosenlund, the word "component" means any element of a software application, which could be anything from an EJB to a Web service to a method. He equated the use of Builders to automate repetitive software development processes to an accountant's use of a spreadsheet application to eliminate repetitive calculations. "You may use variations of the same components over and over again, especially in Web applications through copy-and-paste, and that process is prone to error."

Nicole Carrier, a senior product marketing manager at Bowstreet (www.bowstreet.com), said that with Factory 5, "we have about a hundred Builders that we offer right out of the box. Developers are more pro-

ductive because we offer them all this reusable functionality with Builders they can just snap together to build Web applications. Also, Builders are highly adaptable, [so] you can use [them] all across a corporation. We're seeing a lot of reuse." She said the included Builders are used for forms generation, Web services and for other software automation tasks.

Rosenlund said that the biggest benefit to the Builder model isn't in creating a new application, but in maintenance and in adding new functionality.

"We know that most IT organizations spend 70 to 80 percent of their resources just maintaining and updating existing applications. They have a tremendous backlog of new applications to deliver to the Web for their customers. But their resources are being consumed just trying to maintain what they have already. Our Builders have an ability to change at runtime. If a function needs to change, you can just do that [by

modifying the Builder] at runtime."

With Factory 4, admitted Rosenlund, "the Builders were there, but in spirit, not in name. We discovered over the past year that this capability was worth calling out, giving a name and creating a bunch of packaged Builders that we could include in the box. Rather than having Bowstreet's engineers and Bowstreet's professional services organizations knowing how to do this, now it's easy for anyone to do. The capability was kind of there, but not really there."

"It's all about ease of use for the developer," he continued. "Now that we have this version, we can say that the previous versions of our product were hard to use—we wouldn't have said that before, of course."

Also, he said, the output of the Builders is Java and JavaServer Pages. "In the past, the code we generated was proprietary Bowstreet code, and a developer would look at it and it would be Greek to them.

With this version, any Java developer can look at the output of the Factory and immediately understand what they're looking at."

The Designer application runs only within Borland's JBuilder IDE, though Rosenlund claimed that the company is working on other IDEs. The runtime, which he described as a J2EE model-view controller, must be licensed to run on a J2EE app server. However, Rosenlund and Carrier refused to provide runtime license costs for deploying the technology, saying only that an "average" deployment costs roughly \$400,000.

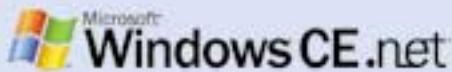
He preferred to talk about Bowstreet's Fast Track development package, which consists of five development seat licenses and three weeks of on-site consulting for \$75,000. "We sit side-by-side with you and build a proof-of-concept application with our Factory." At that point, he said, they'll talk about deployment pricing. ■



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New Middleware Helps Deploy Wireless Apps

BY EDWARD J. CORREIA

You've been asked how much it will cost to let your company's CEO use his handheld computer to access applications while he's on the road. Before you start tallying developer time, there's a pair of new middleware products you may want to consider.

Wireless software developer NetMotion Wireless Inc. last month released NetMotion Mobility 3.5, the latest version of its mobile middleware that when added to any mobile device running Windows, allows its enterprise-connected applications to continue running, even when it loses a connection with the corporate network. The new version adds roaming IPSec, server failover and ActiveSync installation for Windows CE and Pock-

et PC devices. For companies with Linux servers, Helsinki, Finland-based mobile software developer Lifix Systems Oy (www.lifix.fi) last month released Lifix Go 2.0, a roaming solution for Linux servers based on Mobile IP, an emerging standard designed to provide uninterrupted IP service across geographically dispersed subnets. The software supports clients running Linux and Windows 98/Me/XP/2000.

Both companies claim their solutions handle all of an application's communications needs automatically, so developers need concern themselves only with device-specific interface changes. Both solutions work through a VPN tunnel inside an organization's existing GPRS,

GSM, CDPD, CDMA2000 or 802.11a, b and g wireless Ethernet network. NetMotion adds Bluetooth to the list. Lifix Go reportedly works with VPN client software from Check Point, Cisco Systems, Microsoft and SecGo; NetMotion provides its own VPN client. Both also support multiple simultaneous network interfaces, permitting the client to switch from one to another without losing the connection.

According to Shelly Julien, vice president of marketing at NetMotion (www.netmotionwireless.com), her company's solution tricks both the client and the server into thinking devices are



Mobility tricks
apps into thinking
they are connect-

ed, says Net-
Motion's Julien.

on any version of Windows except Windows NT. Additional user licenses cost \$180.

Like NetMotion's Mobility,

always connected. When a device goes out of range, "the client component [tells applications] the network is busy until you have reconnected," she said. The server software, which runs on Windows NT/2000, manages two IP addresses for each mobile client: an unchanging address assigned by DHCP at authentication and another dynamic one for roaming. The two remain linked. The solution costs \$6,000 per server and includes 10 user licenses; client software runs

Lifix Go 2.0 provides security through IPSec, and also supports RADIUS authentication, authorization and accounting. Lifix Go 2.0 runs on Linux servers and clients, and sells for \$4,395 per server, and includes 20 user licenses; each additional license costs \$88.

Although Mobility supports RADIUS, Julien said some users might be forced to use two login IDs. She said that Mobility 3.5 further fortifies data safekeeping with a feature called dynamic rekeying, which permits the system to issue new encryption keys as often as every 30 minutes, rather than once per session. The new software also permits users to be automatically redirected to a specific failover server, she added. ■

Verano Brings Internet to Factory Floor

RTAP/i adds Java to C/C++ process management environment

BY EDWARD J. CORREIA

Verano Inc. has released RTAP/i, an add-on to its Real-Time Application Platform that it says adds Java to its C/C++ environment for building remote monitoring and control applications for industrial devices, and allows the applications to be deployed over the Internet. Previous versions supported only C/C++ development and local connections.



Operators can see how various machines work together, says Verano's Kamal.

According to Verano CEO Pan Kamal, at the core of the RTAP software is its object database for Unix or Windows, which he said can quickly store and retrieve data collected from industrial devices. "It communicates with systems and displays information about them in real time." But he said RTAP should not be confused with an RTOS. "Our software can be used to control [such devices as those] on a plant floor, gas or water pipeline or things on an electrical utility grid."

John Burnell, Verano's director of marketing, claimed that RTAP/i adds the ability to monitor and control devices through a Web browser. "We've created a Java API and [Java Native Interface] layer that connects the RTAP database to our Web server. There's also a charting library

and tag library that allows us to embed RTAP database points in an HTML page," permitting Java applets, applications or EJBs to tap into RTAP functionality, he added.

RTAP/i also includes what Kamal called scanning libraries, a set of device-specific drivers for communicating with any industrial system running OLE for process control (OPC) or with programmable logic controllers (PLCs) that in turn communicate with the device's RTOS. Developers also receive the Visualizer, a graphics tool for building animated device visualization program elements, plus a C/C++ API with more than 350 function calls, Kamal said.

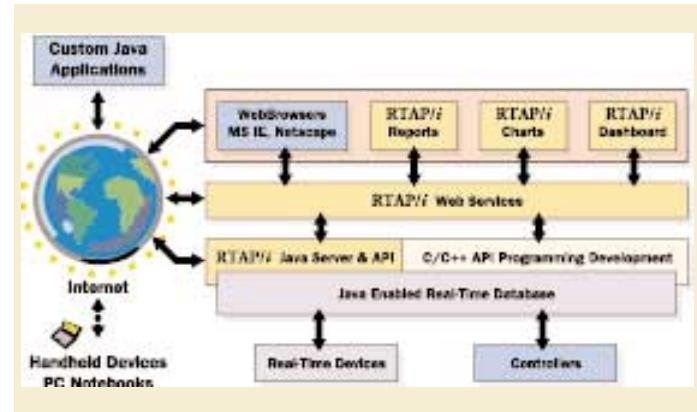
In a field crowded with object databases, Kamal said one of the product's main differentiators is its calculation engine, which he said transforms the collected data into a more usable form, saving developers the trouble. Burnell said you can think of the engine as an embedded spreadsheet that "continuously recalculates changes in data as it streams in and displays the results graphically on a console." Developers also can add their own specialized calculations with C or C++, he said, and dis-

play the results of those calculations textually or as graphical gauges using ActiveX controls generated with the Visualizer.

Burnell said Verano (www.verano.com) positions RTAP and RTAP/i as a development platform "upon which a much more complex application is written," typically for manufacturing, chemical, pharmaceutical, energy management and transportation industries and for utility companies. "These are complex environments with many processes going on simultaneously. [Developers there] need to be able to consolidate that information into single or multiple views." The end users of these apps, Kamal added, are

"plant operators that need to get a view of several machines or a whole series of machines on a plant floor to see how they are interacting together."

RTAP/i runs as a native ser-



RTAP/i lets applications monitor and control systems with a Web browser.

TI FRAMES DSP DEVICE DEVELOPMENT

BY EDWARD J. CORREIA

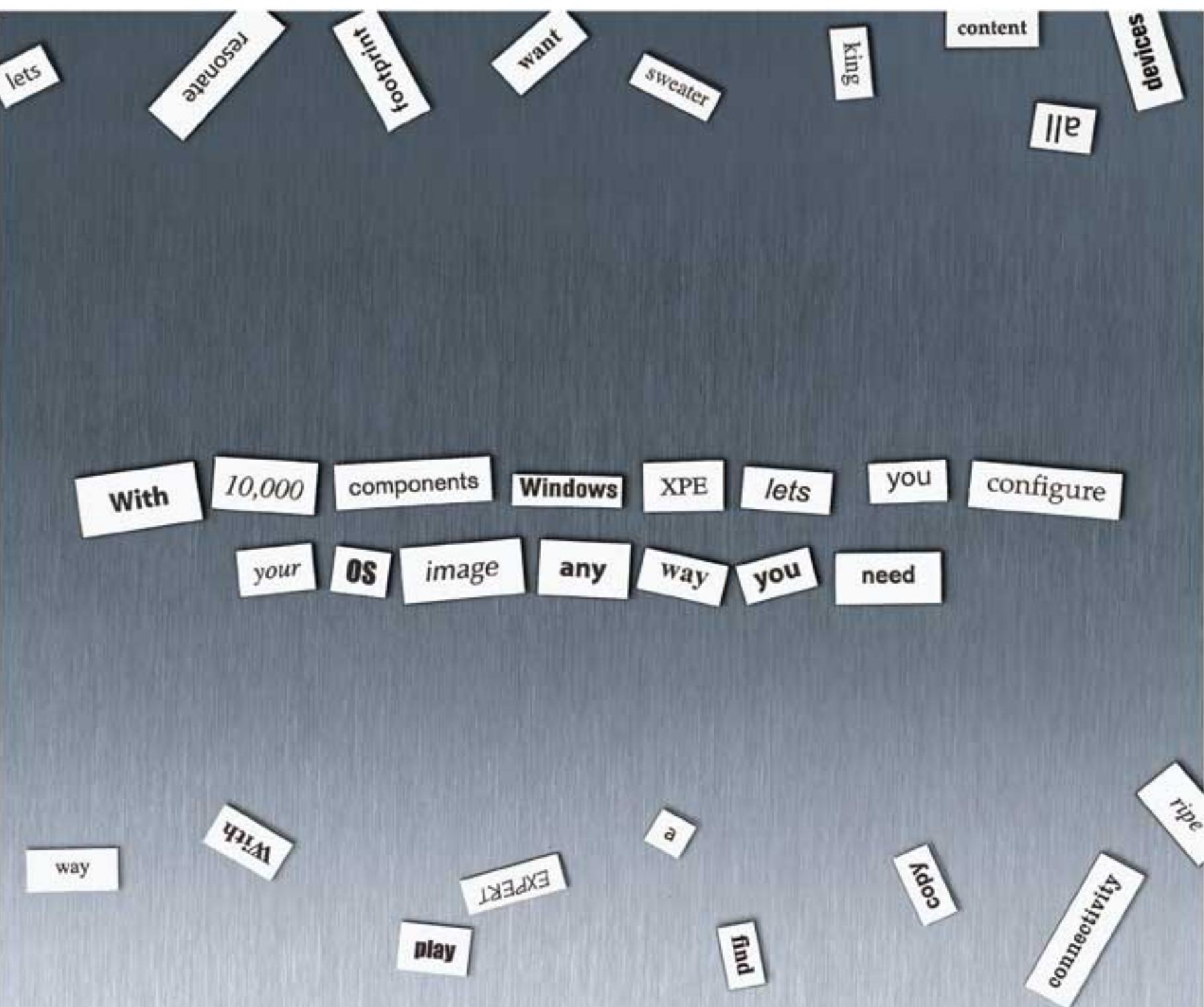
Texas Instruments Inc. has released two DSP software reference frameworks designed to give developers building devices using the company's TMS320 digital signal processor-based boards much of what they will need to manage resources of those boards.

According to Steve Blonstein, TI's technical director of software development systems, the frameworks represent much of the source code that would be common to nearly all

applications built for the company's DSPs. "Whether you're building an MP3 player or a fingerprint recognition system, there are many similarities," he said in a statement, adding that developers currently spend much of their time designing generic code just to manage low-level device resources, most of which can be addressed by the new software.

The frameworks, sets of pre-developed C source code that can be used only with TI's Code Composer Studio 2.1 integrat-

vice on the same Windows or Unix machine as RTAP, and pricing starts at \$25,000, including the object database, device drivers and the visual components for Unix and Windows. A version for Linux is planned for this year, Kamal said. Pricing for existing RTAP users to add Java and Internet capabilities starts at \$10,000. ■



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TOOL TREND

continued from page 1

"We're the RTOS Switzerland," said Alex Doumani, vice president of engineering at AMC (www.amc.com). "We're focused on making our tools work with as broad a range of RTOSes and compilers as we

can, and we leverage the RTOS vendors as a [sales] channel."

Doumani said AMC divides its engineering investment budget into two parts, with the lion's share going to "feeding the monster," or broadening target support for the company's existing products. He said that historically the funds had been divided

evenly between new and existing product development. But now it's "much more skewed toward feeding the engine and whatever will generate more short-term sales." About 40 percent goes to new features, capabilities or tools, he said.

Doumani attributed the shift to the slowing economy.

"Financing gets tight, and companies [ask] how they can get more leverage out of existing tools. Customers are trying to do more with less," he said, adding that no matter how useful or innovative a new tool might be, customers just aren't buying right now.

VDC's Lanfear said that this

strategy is common to many tools companies at the moment. "Today, most companies have one core IDE onto which they try to build increasing levels of functionality. Test suites and new things that

might have been stand-alone in the past are being integrated into the IDE." He also speculated that this sudden expansion might be rooted in vendors' fear of failure. "Some of what's driving this expanding target support may be fear of not having the right solution on the shelf because the guy down the street does."

But TimeSys' Weidman insists that broadening his company's target support was not based on competitive pressure. "It was in response to the variety of hardware; I did not view it as competitive. Competitors are something we think about, but I would not call them our highest priority." Weidman said that offering broad target support along with an RTOS, tools and development services makes TimeSys a more attractive strategic partner.

However, Jeff Payne, general manager of AMC's hardware emulation products, said bundling and maintaining both an RTOS and development tools around the multitude of architectures available today is intractable because of the variety of dimensions required. "No one company can put together the right RTOS, tool set, footprint and feature set for [every] particular application," he said, adding that attempting this can often result in shoehorning. AMC offers no RTOS, and instead strives to work better with others. "A lot of our energy goes into tighter integration with [Wind River's] Tornado IDE," said Doumani.

Lanfear offered another theory as to why the industry is shifting toward enhancement and away from innovation. "I won't say that every tool that needs to be made has been made, but certainly the industry is mature. A lot of the weaker players have been acquired or gone out of business," and the remaining ones are beginning to specialize or partner with other tools vendors for what they lack. "It's an industry where everybody is partnered with everybody else." ■



AMC is spend-

ing less on

building new

functionality.

Doumani.

No Room for Error

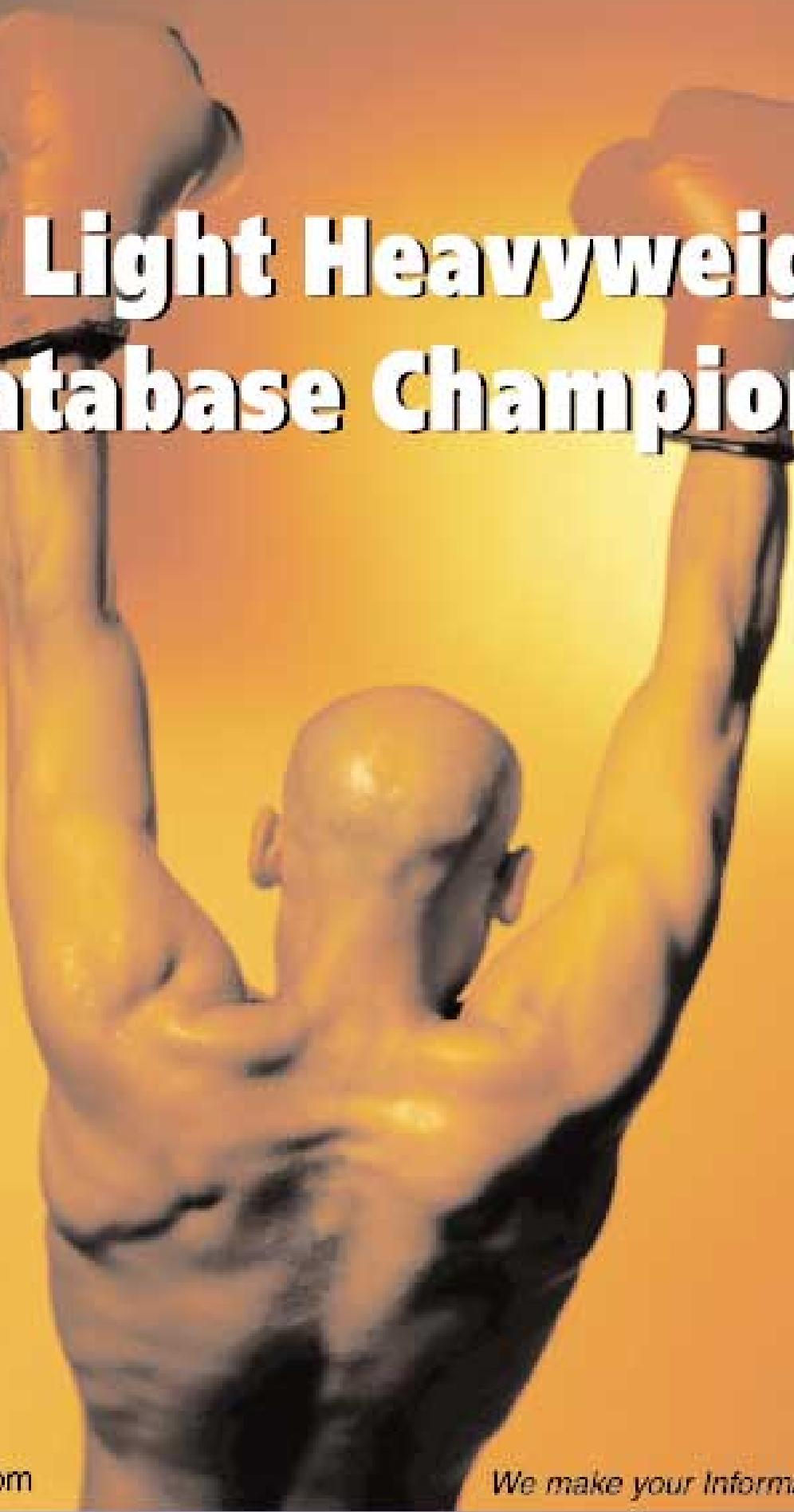
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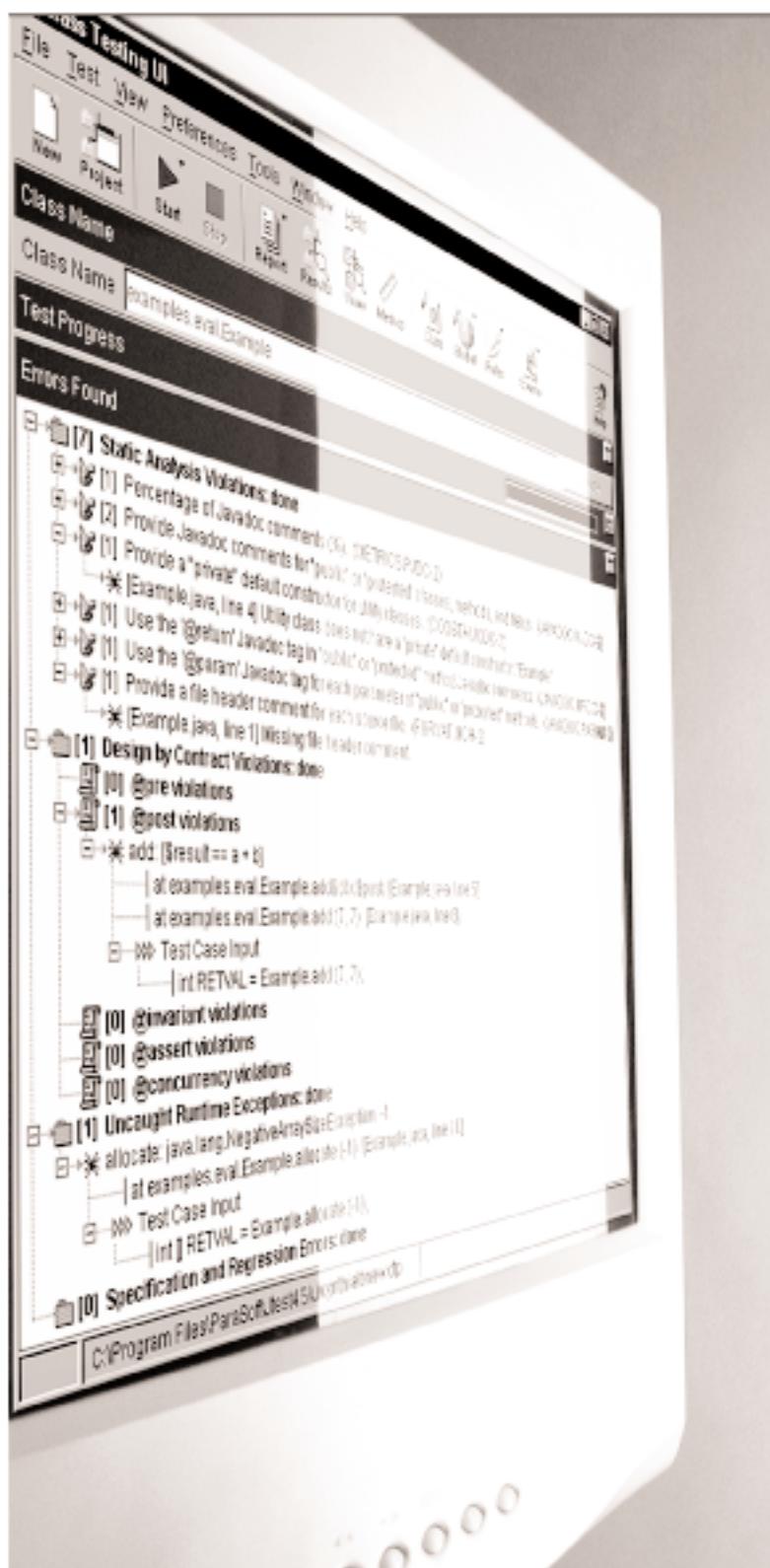
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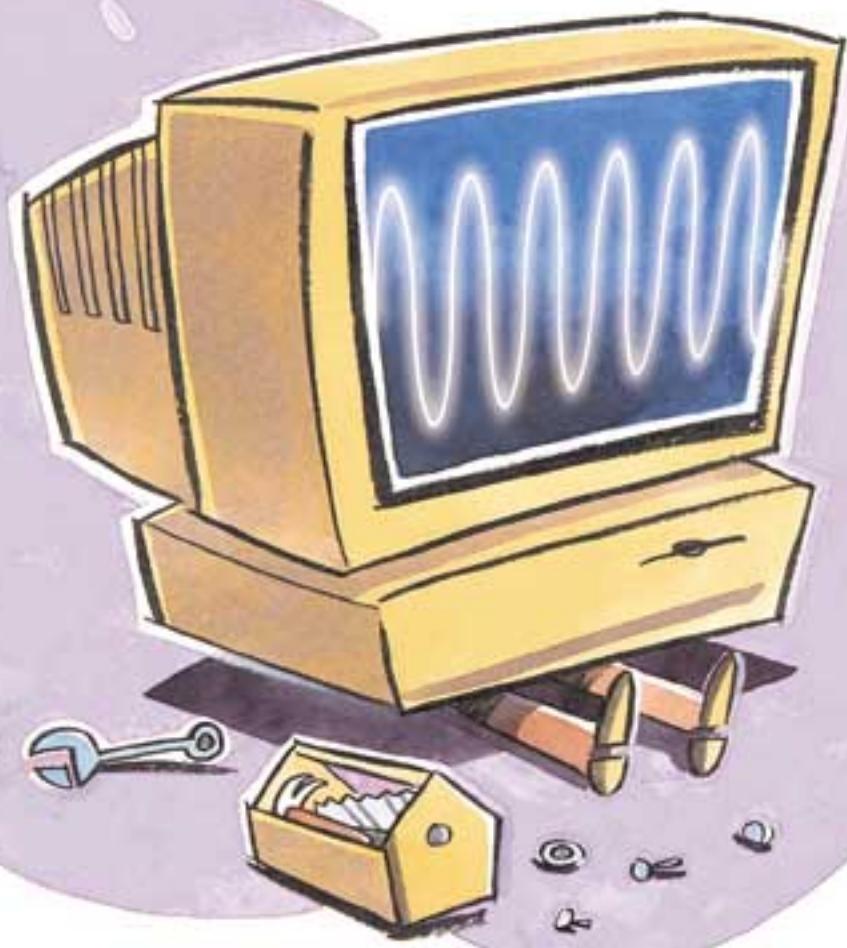
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Web Content Management: Going With the Flow

BY ALYSON BEHR

The desire to create more reliable, higher-performing and more content-rich Web sites has prompted an energized effort on the part of content management solutions vendors to develop products with capabilities that match the complexities of the sites they manage. Debate over where the real pain is and where the opportunities lie in Web content management product development is as fragmented as the early arguments over Unix.

There are proponents of the "build-it-yourself" philosophy who have successfully implemented proprietary solutions and swear by them. Dennis Santiago, vice president of development for Common Tech LLC, has an extensive background in developing online business sites. "In all the companies I've worked with," he said, "there hasn't been use of a commercial management system per se. They've all, in the end, been home-grown versions, and it hasn't been for lack of looking. [Commercial software] fell short because the business models of these companies were such that the content management



component was just one part of the overall business problem."

But not everyone builds a custom solution. As one would expect, solutions vendors emphasize their products' flexibility and customization features, and as if that weren't enough to choose from, development managers also can throw a variety of ASP-like solutions into the mix. In these tight budgetary times, money is often the deciding factor when it comes to a make-or-buy decision. Budgets notwithstanding, sites serve different business purposes and functions and need specialized, customizable feature sets and capabilities to ensure their success.

THE BARE NECESSITIES

Some basic capabilities and characteristics are universally important to all content management systems. Ease of use, by both developers and content creators, is essential. Particularly, it must be easy to dump content into the system, because many content owners and creators are not sophisticated users or programmers.

► continued on page 30

THE 'MAKE-OR-BUY' DECISION'

Dennis Santiago's been around the block a few times when it comes to being involved in technology decision-making and purchasing for start-up Web-based businesses. Santiago is vice president of development for Common Tech LLC, a marketing company that uses the Web as a primary delivery mechanism. Common Tech's busiest site is LuxuryLink.com, an upscale travel services site. Two million pages per day are viewed, with daily content updates and real-time dynamic purchases.

Prior to his arrival at Common Tech, Santiago held various positions, including CTO of TeleScan, which ran the hundred million page views for CNBC.com; and chief strategist for Zacks Investment Research, a builder of custom program sites for electronic brokerages. He was also vice president of corporate development for Data Broadcasting Corp., where he was a key player in the development of CBS-MarketWatch.com.

SD Times: What's your take on major vendors' content management solutions, and which ones have you chosen to look at in the past?

Dennis Santiago: Vignette came up as one of the companies to look at, but basically, we weren't able to use any of the canned solutions and ended up home-growing our own because they didn't address the majority of the business components of the sites we were developing. The CM [content management] part was only one component of the overall business problem. The way that they differentiated themselves was in those content areas that were not manageable by an editorial CM system. That was even in the case of financial publishing operations like CBSMarketwatch or the CNBC sites, which one would think might be workable as classic content management problems, but they weren't.

Which components of those sites provided the challenges?

In the case of the financial operations,

Dennis Santiago, Common Tech LLC

the real-time market data is the pacing variable on how you set up the system. So, in essence, they're database-intensive operations. In the case of product marketing like LuxuryLink.com, again it is database intensive because it's one-to-one microcasting when all is said and done once you get into second- and third-layer pages.

CM [systems] are great for placing content into a system where there's not much variability. For our purposes, they make very good tools to produce the 250-word editorial pieces that flavor out the site. Where they fall short is that they don't have the logic built into the larger system that knows what piece of content to pull up at any given time given what the user is asking for in the right context. Back when I was at TeleScan, we had systems that would automatically write on-the-fly reports as the user was making a request for a particular combination of stocks.

That's pretty sophisticated delivery.

Given that these companies are at the



leading edge of their markets, they have to do extraordinary things to differentiate themselves. They have to punch well past what you can get from a "pull it out of the box" type of operation almost immediately. The other reason that CM systems didn't work out is that they weren't well integrated with other functional areas that needed to be put into place. Even if you look at what are supposedly well-integrated product families, you still have to do a lot of work to get two pieces aligned.

Where's the missing link in the chain?

The code that allows you to customize how that stuff works together—essentially a program language that allows you to feed one into the other doesn't exist very well. There's almost a need for a meta language that is keyed to business model solutions that you program around these business utility tools

► continued on page 30

WEB MANAGEMENT

continued from page 29

The GUI needs to be intuitive and clear in its instruction to the user.

Also key are version control and workflow tracking. "Many of the challenges I've seen have to do with traditional publishing methodologies, like the editorial and sign-off process, as well as integrating with and incorporating a corporation's legacy data repositories," said Mark Dischler, senior programmer for Los Angeles-based interactive marketing and Web development company Symbblaze Inc. (www.symbblaze.com). "When making a decision to design a custom publishing solution or implement an out-of-the-box solution, those are must-have features and are usually the biggest pains."

An essential part of content management is automating content creation, where systems can move content automatically through an organization, ultimately making the content available to a WCM tool user based on job role. Brian Dirking, vice president of business development for content server vendor Stellent Inc. (www.stellent.com), said that his customers



Stellent's customers require workflow tracking, says Dirking.

require library management, revision control, check-in and check-out and workflow tracking, as well as time-based and approval-based content release capabilities. Time-based release is handy for sensitive content, and also enables the automated uploading of content outside normal business hours.

Site rollback is an important feature for vertical industry site personnel who may need to see exactly what was on their site on a particular day, say for litigation purposes.

SET METHODOLOGIES

According to Symbblaze's Dischler, a drawback to using a solution with set methodologies is that on paper, many of the large vendors' offerings look perfect, but in reality, they're less impressive.

"Vignette looks great because it allows multiple server scripting languages like ASP [Active Server Pages] and JSP [JavaServer Pages] to be used for creating intelligence on pages, and claims to integrate very easily with many of the high-end database solutions like Oracle," Dischler said. "But what really matters is just how the content is organized and how the user experience is on the Web site. The user experience is just more important than these other features, so if you are going to go with a custom solution, I don't see the advantage of an out-of-the-box product."



What matters is the user experience, says Symbblaze's Dischler.

"I'm starting to identify new platforms like PDAs, wireless and other WAP devices that we need to deliver content with a consistent look and feel to, using technologies like XML and custom solutions."

Not all developers are as tough on vendor solutions. Robert Emmert, president of Aurora Technology Associates, said that, on the whole, he's happy with the enterprise solutions he's come in contact with—as long as they are used purely as data repositories. Emmert currently is working with Interwoven Inc.'s Team Site 5.0.1 and is enthusiastic about its abilities and feature set.

According to Emmert, "Interwoven's configuration, workflow and tracking capabilities allow for outstanding collaborative development of large-scale Web systems. It allows for distributed upload so individual content owners can check out pages, work on their own system which can be remote, and refile the updated version. It also provides us with site rollback and archiving capability, which is an important feature for us on the business side."

On the other end of the product scale is Fog Creek Software (www.fogcreek.com), which recently released its first-generation product, CityDesk Profes-

sional edition. Targeted to small organizations that don't need the power or features of a big-iron system, it is priced at a few hundred dollars per seat. This XML-based application boils the content management process down for HTML users and doesn't offer many of the features that corporate entities require, such as workflow, approval and automated content release and retirement.

Fog Creek CEO and founder Joel Spolsky said, "The big-iron vendors' systems start at about a quarter of a million in software, and they have maybe a couple thousand customers. Then think of

all the people you know who need Web sites with some form of content management enablement. There are probably a couple million of them. What we initially envisioned was providing small college newspapers, churches [and] clubs with an affordable solution and a lower barrier to entry.

I couldn't care less about the CNNs of the world."

Aurora's Emmert said, "At the end of the day...it's not likely that any one content management system will solve all your management woes. Likely, no matter how you cut it, some degree of customization will have to happen."

When all is said and done, the challenge faced by software and Web developers as well as the business department is in deciding which leading-edge technologies and tools to bring online that will deliver the system performance they need to maintain their competitive advantage. This means reasonably priced solutions that can be implemented inside a workable deployment time frame that won't push developers and management onto the bleeding edge a year from now. ■

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MAKE OR BUY

continued from page 29

that's missing. Until something that fills that need exists, the people that build the high-performance Web environments are always going to be facing a make-or-buy decision. Usually because of the need of the business model, it's going to wind up being make.

Who manages the custom content management code at LuxuryLink?

The IT staff actually maintains control over our home-grown system. They tend not to touch it very often, and then there are only one or two programmers who have that authority. The process is very rigorous. We program ideas in a development environment and bring them to the production environment using test copies. Pretty standard procedure, but as it turns out, many content management systems don't have a provision for that.

As a result, it's really easy for an end

user to mess up the site. Not because they want to; they just don't know any better. The problem with that is that many systems don't track who's doing what, so we have implemented a time, date and user ID for every [change] in the latest version of our software. We have to know who did what very quickly so we can get the site back to being commercial quality as soon as possible. Without that, we'd be searching around for minutes, maybe hours that we don't have when we have a bidding system that's running [in] real time.

What about globalization?

We definitely have the international site hits to support a globalization project, but the products in that area fall short of filling the bill for us. If someone could come up with a good natural language translator that reduced everything down to lingua code, then back out, that would be something I'd poke my head up out of the sand for.

—Alyson Behr

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EDITORIAL

Content Vs. Code

The lines have been blurring—it's hard to tell where software development stops and content management begins, when managing a complex and evolving Web site's data is a task for a line-of-business department, or when it falls within the purview of the development manager.

Nowhere does this manifest itself more than in the construction of the content management system. One approach is to start with a predefined set of content, and then build a solution that wraps functionality around it. Another is to acquire a predefined content management solution, which already contains a rich set of administrative and end-user functions, and then populate it with new or existing content.

In many ways, the idea of purchasing a sophisticated content-management system is akin to buying any other large packaged application, such as for ERP or CRM. However, at least with enterprise resource planning and customer-relationship management, both corporate executive and development managers had an idea of what the processes were, as well as the costs and benefits.

With content management, the processes are newer, and the field is rapidly evolving. Where does XML fit into content management? What about Web services? How should a content management system work with a portal? What are the best practices for adding content, for creating content links, for indexing, searching and viewing content? How does one define scalability or performance within this domain? What should the architectural relationship be among the content repositories, business rules engines and output systems? These are newer questions, and while all of the major CM vendors have their own recommended answers, there is, as yet, no consensus on what a standard set of functions and best practices should be.

If it's difficult to understand what to buy, it's just as hard to know what to build. For the most part, line-of-business users and managers may not have a clear notion of exactly what their badly needed content management system should do, or how it should work. That will make it difficult to extract requirements. And even with all the good will imaginable, it's certain that many of the initial requirements are going to change. Drastically. And often.

What it comes down to, of course, is flexibility. Sounds like a job for rapid prototyping, doesn't it?

One strategy to consider: Whether you're planning to ultimately build your own content management system or buy one from a well-known vendor, think small to start with. A quick-and-dirty solution may provide your users and business managers with a system they can work with, customize, deploy, support and study.

And then throw it away when they've learned what the *real* content management system should do, and how it should operate.

Then, and only then, should one commit to a multi-million-dollar commercial system, or invest in the resources to design, build and deploy a major home-grown CM system.

This is a big project, and the best way to learn the real job requirements is to gain experience first. ■

GUEST VIEW

UNDERSTANDING DESIGN BRIEFS

One of the key challenges in a custom software development effort is creating effective design specifications. A good design provides two key results. It serves as a specification for a developer to build the proper system, plus it serves as a communication tool to the user community that the designers understand their business and have designed their business requirements correctly and succinctly.

In Object Oriented design, the Unified Modeling Language (UML) offers the tried-and-true use-case approach to design. This is an excellent tool to utilize for the high-level design of large systems. That can lead to challenges, however, when the next level of increased detail needs to be documented.

In response to those challenges, we decided that we needed a tool that provided more detail than a use case, and that could enable better communication with the users. The two of us, along with another manager, put together the format of what we call a "design brief." To do so, we brought together some user-based technical specifications from previous experiences to make a new design tool with enough detail.

Since then, the design brief has worked on many occasions to take the information from the use case, and go beyond it to document the requirements in further detail. After a business analyst documents business requirements using a use case, a developer can create a design brief, which integrates the business and technical requirements in a format that is easy for the user community to understand and approve. It also acts as a bridge to take the detailed logical design and develop a physical design, which documents the technical aspects that describe the "how" as opposed to the "what."

A design brief is made up of five sections:

1. Overview. This section contains a high-level description of each user-interface screen. The description takes the user's point of view and

focuses on the business purpose of that particular screen.

2. Screen Prototypes and Component Description (where applicable). This contains an HTML screen prototype as well as detailed descriptions of each component (button, link, widget and so on) on the screen. It is important to review screen prototypes with the users early in the design phase in order to validate the concept and functionality as well as the look and feel.

3. Mapping of Requirements to Original Use Case. This section cross-references the design brief to the use case. There is generally a one-to-one correspondence between the use cases and design briefs, but not always. Exceptions exist when the use case covers both batch and interactive functionality, or when a subuse case is complex enough to warrant a separate design brief.

4. Glossary of Terms. This glossary is important to ensure that the designers and users are in sync with their interpretations and are speaking the same language.

5. Issues. This section provides an area for both users and designers to record and track all issues, questions and resolutions related to the brief.

Creation of a design brief assumes that the high-level requirements have already been worked out with the users and the development team can proceed to flush out the remaining details before creating the technical detailed design. Indeed, management needs to create a document review process before beginning the design brief process. This allows the designers and users to get the design finalized and approved in a timely manner.

After the developers have identified the requirements and finished the first draft of the design brief, we suggest that it be handed over to the project's quality-assurance team for review. This ensures a high-quality product, but more important, it gives senior designers an opportunity to

review the design before giving it to the users. Only after QA gives a stamp of approval should the developers hand the design brief over to the users for review.

The user feedback should be discussed in a facilitated session between the designers and the users. It's helpful to have a laptop and a projector at the meeting and assign one person to make on-the-fly changes to the design brief. That way, everyone can immediately see the changes and further refine the design brief as more input is given. The objective is to have an approved design brief by the end of the meeting.

We see three major advantages to the design brief.

First, the development team has complete client involve-

ment in defining the requirements, thereby reducing the risk that changes will be made later in the project when they are more costly. Second, it allows the team to leverage senior designers across multiple design briefs, providing consistency in the design, and allows more junior designers to contribute and grow. Finally, the review cycle is shortened because of its interactive development.

The cost of building a software-based system is high—but the cost of implementing the wrong system is even higher. The design brief is an excellent tool for forging a link between users and technical staff to enable better communication of business needs in the iterative design process. Better communication ensures that the correct system is built, while also developing a comfort level with the users of the system that the developers are on the same page. In addition, design briefs are structured in a way that provides a natural progression to the physical design.

All of these benefits combine to provide better communication and better service. ■



NEIL
HUSE



LEW
SAUDER

Neil Huse is a project manager and Lew Sauder is the QA manager at RCG Information Technology.

THE SHARED-SOURCE MOVEMENT

Buy into one Microsoft technology and pretty soon it wants another Microsoft technology. And another and another and another until, before you know it, you're completely dependent on Redmond technology to operate.

Microsoft used to be pretty open about this hungry spiral strategy, and got away with it due to massive marketing muscle and products that really do pay attention to ease of use. But the company has had to change some dance steps in its Competition Shuffle partially due to the law's long arm and partially because other technology initiatives are gaining ground.

Although Microsoft is clearly in the lead on the Web services front, its biggest headache right now is the open-source movement. So just like it did with the Web, Redmond seeks to conquer by opening its arms and embracing the enemy. This time, the move is dubbed "shared source."

Shared source refers to an imminent licensing program that will release more than 1 million lines of Windows and .NET source code to the academic

community. The .NET Framework especially is being targeted, as shared source will release a version running not only on Windows XP, but on FreeBSD as well. Further, where previous source-view schemes have prohibited any modification of the code, shared source will allow modification of Windows source code for noncommercial and research implementations.

But even without the ability to modify the source code, shared source is a big help to integrators, commercial Windows developers and security analysts. When operations like these run into bugs and compatibility problems without source-code access, they're stuck waiting for bug fixes and patches at Microsoft's convenience. The ability to analyze the source code gives these companies a head start on either patching the problem themselves or finding the most efficient workaround. That's a big help.

Many see this move as a response to Sun's recent release

of sections of the Java technology to open source for the purposes of boosting Java's acceptance level with Web services developers. Sun even went so far as to begin a program allowing open-source developers to submit technology changes to Sun and, if approved, receive financial help with their projects.

For its part, Microsoft hasn't gotten quite that far, but it did submit parts of .NET (including all of C#) to ECMA in December 2001. Not only did the specs win approval from that association, but Microsoft even funded an effort by Corel to use these specifications to create the version of .NET that runs over FreeBSD.

But just as Microsoft is trying to one-up open source, open source turns around and does a little dance all its own. Begun by the CTO of a company called Ximian, a big name in Linux desktop environments, an open-source initiative dubbed Mono seeks to port .NET to Linux. Basically, the .NET architecture so impressed these folks that they've begun Mono with the intention of building a frame-

work of their own that is 100 percent compatible with .NET. That means once Mono is completed, any software developed using .NET will automatically be portable to Linux.

Naturally, this makes total sense from an open-source perspective. That movement is all about choice: choice for developers, choice for users.

Will Microsoft see it as a good thing? I think that will depend entirely on how the financials work out. If Mono simply turns out to be a quick way to steal a .NET application and move it into a noncommercial environment, then Redmond will hate it and seek to kill it by altering .NET so as to make it not only incompatible with Mono but even more powerful for developers. Think back to HTML and DHTML. If, on the other hand, the folks at Microsoft have accepted the fact that Linux won't go away and Mono evolves into an engine that allows Microsoft to make a little coin off that platform, well then, I see them loving every bit of it. And why not? ■



OLIVER RIST

WEB SERVICES MEAN FATTER CLIENTS

If the idea of Web services—that is, of being able to push some forms of computing onto remote servers—suggests to you that PCs, laptops and handheld devices will be doing less work, you will need to rethink your view. Web services are an enabling technology. That is, they enable consumers of the services to do more, not less. And when client-side endpoints can do more, they generally want to have more power to do it. Meaning they want fatter clients.

The issue of thin clients has a somewhat bogus aspect to it. During the mid-1990s, when it became clear that Microsoft was indeed going to own the desktop, server vendors began an odd counterattack. They tried to establish a counterfoothold by beating the drum of total cost of ownership (TCO). The basic argument was that the TCO of PCs was astronomically high: Not only was the hardware fragile and in need of constant maintenance, but the software—all from Microsoft—was an expensive, complex, bug-infested hairball that sapped the PC's resources.

But then, the server vendors came up with the weird solution of the thin client. The argument harkened back to the days of really dumb terminals, where every keystroke was passed along to the mainframe for processing. Remember how easy it was to manage all desktops then? Remember how IT controlled the apps and the system configuration? Remember how cheap it was to add a new user: a cheap terminal, a cable, a port, a password.

Extending this metaphor to the 1990s, Sun and IBM (principally) argued that what business owners really wanted was simpler PCs that would download the applications and data from servers and run them locally. Sun's Scott McNealy became the poster boy for this view and even proclaimed the folly of having a generic PC when what you really needed was less-powerful dedicated devices.

So Sun and IBM rolled out the equivalent of smart dumb terminals that looked and acted

like crippled PCs. Two things became evident: They weren't that much cheaper than full PCs, and nobody cared for the less-powerful model. When two years later PC prices plunged below those of these PC wannabes, the game was up. IBM and Sun had to abandon the campaign.

But apply the theory to handhelds, and you see that the idea is still bunkum. Palm Pilots started out skinny: not much memory, a simple monochrome display and a few limited apps. Did users ask for a halt on features, happy with these skinny inexpensive clients? Of course not. They quickly forsook them for today's feature-rich devices. Everyone wants devices that do more.

Back to Web services. When widely deployed publicly in a year or two, Web services will enable clients to obtain much more information from remote sites than is now possible. For example, today a United Parcel Service customer can look up the last 20 packages on the Web site's tracking feature—every stop on the journey is logged and available, but only visually. In the

future, the same customer will be able to download all the records of shipments at the beginning of each workday. Client-side software will then analyze the data, prepare reports or simply log it.

On an intranet, truck drivers might use Web services to upload their route to a company server and receive in return weather forecasts, construction alerts and special handling instructions for all stops on their routes. This data will be processed at the desktop or client device and likely stored there, too.

As XML becomes more widely used and implemented, true peer-to-peer data interchange will occur, making what goes for P-to-P today look comparatively thin. Web services hold the promise of enabling applications of much greater complexity and sophistication. Users will want to take advantage of these newfound capabilities, and as a result, will need more power and more capability at the endpoints. The whole weight of computing history favors their position. ■



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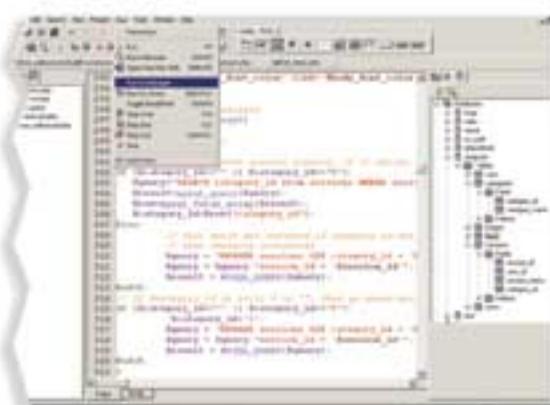
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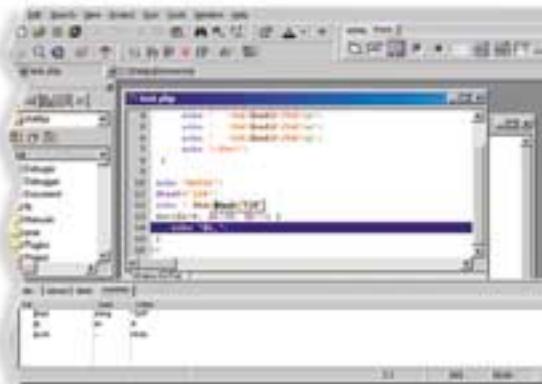
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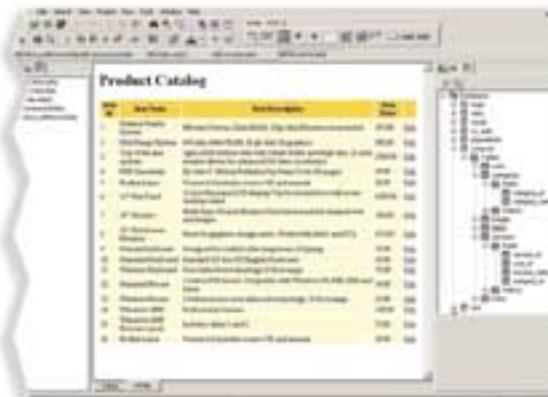
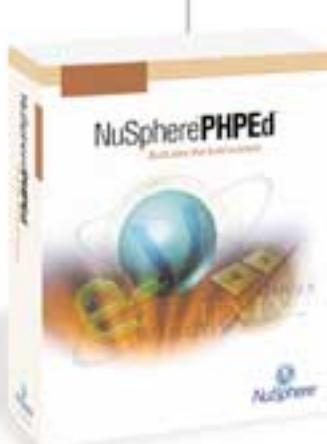
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CAN'T WE JUST GET ALONG?

JavaOne, the gathering of the tribe. The big party. And, maybe, just maybe, the start of a new day in Java. One in which the Java companies will start working with each other instead of against each other.

They'd better. Let's face it: Every time there's a story about companies fighting over Java or there's a report about one company's Java not working with another's, developers have one more reason to look elsewhere for their programming needs. In the long run, that will kill the Java firms deader than anything Microsoft can come up with.

The companies say the right words. At the show, Simon Phipps, Sun's chief technology evangelist, repeated the classic Sun party line that Java companies should "cooperate on standards, compete on implementation." It's easier said than done. Still, I'm seeing some encouraging signs that the vendors are giving cooperation more than lip service.

BEA, for one, seems to be understanding the concept. You may recall that the company was blasted for trying to fragment Java by tying its new WebLogic Workshop (formerly known as Cajun) to its WebLogic application server with what some saw as proprietary methods. BEA may not agree with that take on the product, but the issue is

history. The company is now sending those questionable parts of WebLogic Workshop through the Java Community Process (JCP) for group approval.

Looking to the future, Sun introduced its Application Verification Kit (AVK) at the show. The AVK consists of a static code tool, an instrumented J2EE reference implementation and a reporting tool. From early developer reports, AVK sounds like it works quite well. It should prove to be a popular, indeed essential, addition to any shop building applications that must work on multiple J2EE servers. With this tool in place, you'll have fewer questions about whether your code will work on, say, WebLogic or IBM's WebSphere.

IBM and Sun also seem to be finally making nice with each other about their open-source development tool projects: IBM's Eclipse and Sun's NetBeans. The two had been posturing at each other like they were Mike Tyson and Lennox Lewis instead of Fortune 500 companies.

At the show, ZDNet reported that IBM's WebSphere managers were suggesting that the two companies should seek to work together with Eclipse and NetBeans. Phipps said that Sun is exploring ways to link the two together

and that Sun has approached IBM about merging the two projects.

That's a heck of a long way from January when Phipps told SD Times, "IBM is screwing up. They've forgotten to invite the only company that has actually done any open-source tools work, and they've broken open-source rule No. 1, which is not to fork an existing community until you discover that the community won't do what you want."

Peter Young, Sun's vice president of Forte, is working with IBM to bridge the gap. By the time you read this, I'm hoping that Sun and IBM will be working together on combining the best features of both open-source IDE efforts into a single package.

Thinking of open source, Sun also finally made peace with the Apache Software Foundation. After a fight that had gone on for far too long, Sun legal finally got behind its engineers and agreed that Apache can implement all present and future Java specifications and Test Compatibility Kits in open source. This opens the door for Apache to play a larger role in the JCP and ensures the future of the popular Jakarta Project, Apache's set of open-source Java platform programs.

Of course, I'd feel even better about Sun and the JCP if they'd finally make JBoss J2EE-certified. There's something

profoundly off when JavaWorld Magazine can present its Best Java Application Server award to JBoss, a non-J2EE-certified platform, over the likes of WebLogic and WebSphere, or Sun's own iPlanet App Server, for that matter.

Maintaining open standards has been and will continue to be critical to Java's success. I don't care if it's a light bulb or a language, any group of products without industrywide standards will fail. The second that Java starts to fork, especially in the face of Microsoft's full-court .NET press, is the second that Java starts down the chute to the status of such interesting but almost commercially worthless languages as SNOBOL.

I know it, you know it, and now it seems the vendors are getting it. And that is what really struck me about this JavaOne. From Sun's making peace with Apache and IBM, to the introduction of the AVK and BEA's working with the JCP, the Java community appears to actually be becoming more of an open and real community. Frankly, this gives me more hope for the future of Java than any Sun-versus-Microsoft lawsuit. For this week, this conference, I could believe that Java really will continue to be an important programming environment. ■

JAVA WATCH



STEVEN J.
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SMOOTH, SATISFYING TASTE OF PORTLETS

You put down the phone and sigh. Another department with another request for a specialized Web site. All that work for a limited set of users.

Sure, it's good that you and your staff are busy, but your budget is still fixed, you can't add staff, and the demands are badly outstripping your ability to deliver quality products. This is no fun. So maybe it's time to sit back and contemplate a good portlet.

Contrary to first impressions, a portlet isn't a downsized version of a fortified red wine (that's port lite), nor is it a portable sanitary facility (that's a Port-o-let, see www.wm.com). In fact, it's a specialized Java applet designed as a plug-in for a portal framework. A portal framework, of course, is a server application for your Web site that supports access to other information you have on your enterprise.

But we're getting ahead of ourselves. First of all, you already know what a portal is. You might even have one. For a long time, a portal was simply a Web page on which you consolidated information, resources and links so that your employees, customers or suppliers could find the information they needed quickly and easily. Portals could exist for all sorts of reasons, from looking for specs of products you needed to buy, to one-stop shopping in the corporate knowledge base. In fact,

knowledge management portals have done a lot to help companies run more efficiently and react more quickly to changing business conditions.

The problem, as you know, is that it takes a lot of resources to develop and maintain a portal, and if you need to create applications to support data retrieval or other activities, these take a lot of work, too. Fortunately, there are solutions.

Instead of spending your annual budget on a sea of applications and pages that you can't repurpose, you can look to products that already exist.

One major vendor of portal frameworks is IBM with its Web-Sphere Portal Server. The open-source product is Apache's Jet-speed enterprise information portal. Portal frameworks are also available from Plumtree, SAP and Viador. Some people might even consider Lotus Notes and Microsoft Exchange to have portal-like capabilities.

Which of these products you choose depends on what you're already using for your other Web-serving activities. For example, if you're already using open-source software for your server platforms and server applications, you're probably going to be very comfortable with Jet-speed. Likewise, if you're using mostly

IBM Web products, then the IBM server is a logical choice. However, it might pay dividends to look a little deeper.

One factor that portal framework vendors like to play up is their partnerships with other vendors. SAP Portals, for example, includes Cognos, Interwoven, Netegrity, WebEx and WebMethods among its partnerships. If you already use applications or other products from these vendors, maybe you'd be happiest with SAP.

Likewise, it pays to investigate how much there is available in portlets you can use. Some of the providers of portal frameworks maintain extensive lists of portlets that are already developed. You can use these as they are just by installing them into the portal framework. You also can modify them to meet your needs specifically. In addition, the providers of these portal frameworks publish the APIs and other specs necessary for you to develop your own portlets.

Also, some of the portal framework providers make extensive documentation for developers available on their Web sites. IBM, for example, provides detailed "how-to" information, as does Jet-speed. By the time a skilled developer has read through this information, using or creating a portlet should be within his or her reach.

The nice feature of portlets is that they let you do whatever you need done in

your portal. As is the case with other Java applets, the limits are mostly related to your imagination than to the limits of the product. The other nice thing is that there are lots of them already out there.

Unfortunately, the portlets for one portal framework won't necessarily work with a different framework. While there is work in progress on a standard, it's not something you can plan on using today.

However, with a portal framework, you don't have to do nearly as much development work to meet a user requirement as you have to when developing a stand-alone Web application. Much of the basic functionality is included in the framework, so all you have to do is develop the user interface and figure out what data you need and where that data is located. Your development time is dramatically shortened, your development costs are way down, and you're working to a standard, at least the one for your framework. Even better, once you create a portlet, you can reuse it for other purposes. Better yet, you might be able to find a portlet that's already written and is available for use, so you might not even need to create it. At last, your budget isn't a straitjacket.

Once you've got your portal framework in place and have the portlets you need, maybe you won't have to work so hard. You'll have time for that glass of port. ■

WEB WATCH



WAYNE RASH

Wayne Rash is a technology journalist and consultant.

As DAWN BROKE, CODY REALIZED HE WAS ILL-EQUIPPED...



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A DOT-COM SURVIVOR

At a time when most companies that survived the e-commerce implosion are scraping the dot-com extension off their glass doors and convincing potential customers that they have real goods and services to provide, Gantthead.com is turning back the hands of time and counting its hits to make money.

Gantthead, which provides online and packaged reference information for software development project managers, is embracing its business plan and actually moving its revenue model more toward what defined a "pure-play dot-com" two years ago. CEO Dave Garrett said that more than 75 percent of the company's revenue, which he would not divulge, comes from advertising, with the rest coming from subscriptions to the www.gantthead.com Web site and product sales. And, he expects the revenue shift to continue toward advertising as he builds a base of project managers using the company's best practices, which are based on the James Martin & Co. development processes.

Have they lost their minds? Don't they read The Industry Standard? (Uh...guess not, at least not anymore.) How could they possibly find customers and business partners willing to invest time and, more important, money in a company that's doomed to fail simply because of its appellation?

To the contrary, not only does Garrett believe businessmen can build solid companies on the Internet, but he thinks many opportunities are being missed because "people think the Web is dead."

Garrett likened the dot-com in his company's name to a 1-800 prefix used as an identifier for businesses that sell such things as mattresses and flowers.

INDUSTRY WATCH



DAVID RUBINSTEIN

"It's descriptive," he said. "If those [1-800] companies were to change their names, they'd be hard to find."

So what made Garrett smart enough to ride out the economic shakeout while other dot-coms littered the information superhighway like so much virtual roadkill? "We didn't sell out during bad times," he said. "We didn't offer real-low prices and destroy our core value proposition."

Companies that based their business model on generating user lists and creating revenue from people advertising on the site, he said, failed because they sold their lists at low prices and high volumes, resulting in a user base that was inundated with advertising and pop-up boxes touting online casino gambling.

Garrett also pointed out that Gantthead is somewhat unique in that it is a serious reference site for software development and not merely an information portal that will accept advertising from many diverse areas. "We didn't wear out our user base, throwing advertising at them that wasn't targeted," Garrett said.

Gantthead was initially funded with a stake of \$1.6 million as it spun out of Martin. Unlike many dot-coms, Garrett said, Gantthead did not face the pressure from venture capitalists to rapidly grow the business; it was allowed to remain small. In its heyday, Gantthead was a 20-person company. It now employs 12. The company, which has revenues around the \$10 million range, according to Garrett, has been cash-flow positive for more than a year. Revenue this year is expected to be 30 percent higher than last year.

Another key decision, Garrett said, was to not burn through the cash on advertising and marketing, instead focusing on

developing partner relationships to grow the subscriber base. And unlike other Web businesses, Gantthead believes it has created something that development managers will find useful throughout their careers; it's not just a one-time buy.

Meanwhile, the community has grown to more than 90,000, Garrett claimed, although the bulk of the users, who qualify to use the site for free, receive only a little more than half of the site's content. Premium members, who pay either individually or through a corporate package, are "in the thousands," he said. Garrett said users are deleted if they are inactive for two months, allowing Gantthead to show its advertisers that the community is a vibrant one.

It is the content, of course, that will either hold the community together or leave people in search of better information. The venerable Martin processes power the site; in a league with the Rational Unified Process, they have evolved over time to take on the systems development processes that large IT shops face, Garrett explained. The packaged product, which includes templates related to the legacy development processes, usually gets a major upgrade every year, while the information on the site is updated daily. A new release due out this summer will include a process for setting up and maintaining a Project Management Office.

While it's too early to take dot-coms off the endangered-business list, Garrett is optimistic. "There's still a stigma," he said, "because so many people say the dot-com model doesn't work. Well, it doesn't work if you spend every dime you have on marketing. What we're doing is not unique. I think our offering is, but the way we do business is not."

Maybe it wasn't two years ago, but it has become unique today. ■

BUSINESS BRIEFS

Starbase Corp. has announced that Jim Harrer, president and COO, is assuming the role of CEO. Harrer follows William Stow, who founded the company in 1991 and who will remain on the board of directors. Also, the Starbase board elected John Snedegar to serve as chairman. Snedegar is president and CEO of Micro General. Harrer, who became president in January, has instituted cost-cutting measures in an attempt to help the company achieve profitability.

... **SSA Global Technologies Inc.** has acquired the interBiz product line from **Computer Associates International Inc.**, which includes products for supply-chain, financial and human-resource management. Terms were not disclosed. ... **Wasabi Systems Inc.**, provider of the NetBSD operating system for embedded systems, has lined up an additional \$2 million in venture funding, bringing its total first round to \$4 million. **Praxis Capital Ventures** and **Himalaya Capital** are leading the round. Wasabi was founded in May 2000. ... Application testing and monitoring solution provider **Empirix Inc.** has completed a third round of financing led by **Lehman Brothers Venture Capital** for \$29 million. ... **Mercury Interactive Corp.** reported slightly lower first-quarter 2002 revenue and income than a year ago, showing \$90.5 million in revenue compared with \$90.7 million for the first quarter of 2001. Net income for the quarter ended March 31 was \$12.1 million, or 14 cents per share, as compared with \$16.1 million, or 18 cents per share, a year ago. ■



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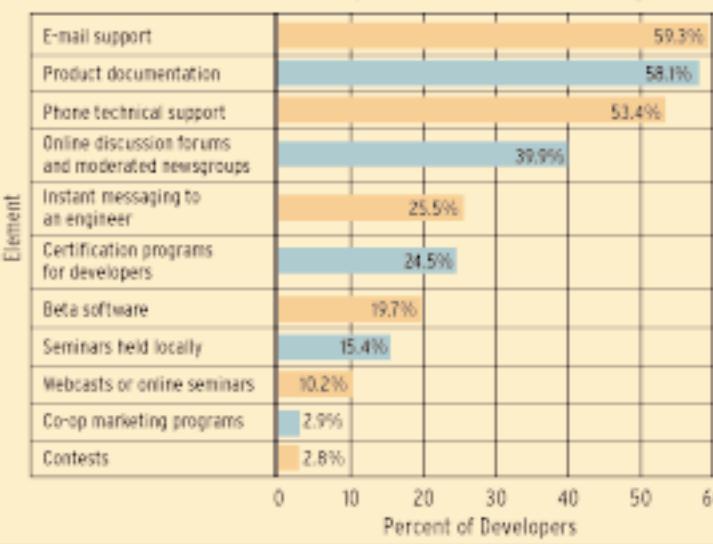
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Which Three of These Elements Are Most Important To Include in a Developer Relations Program?



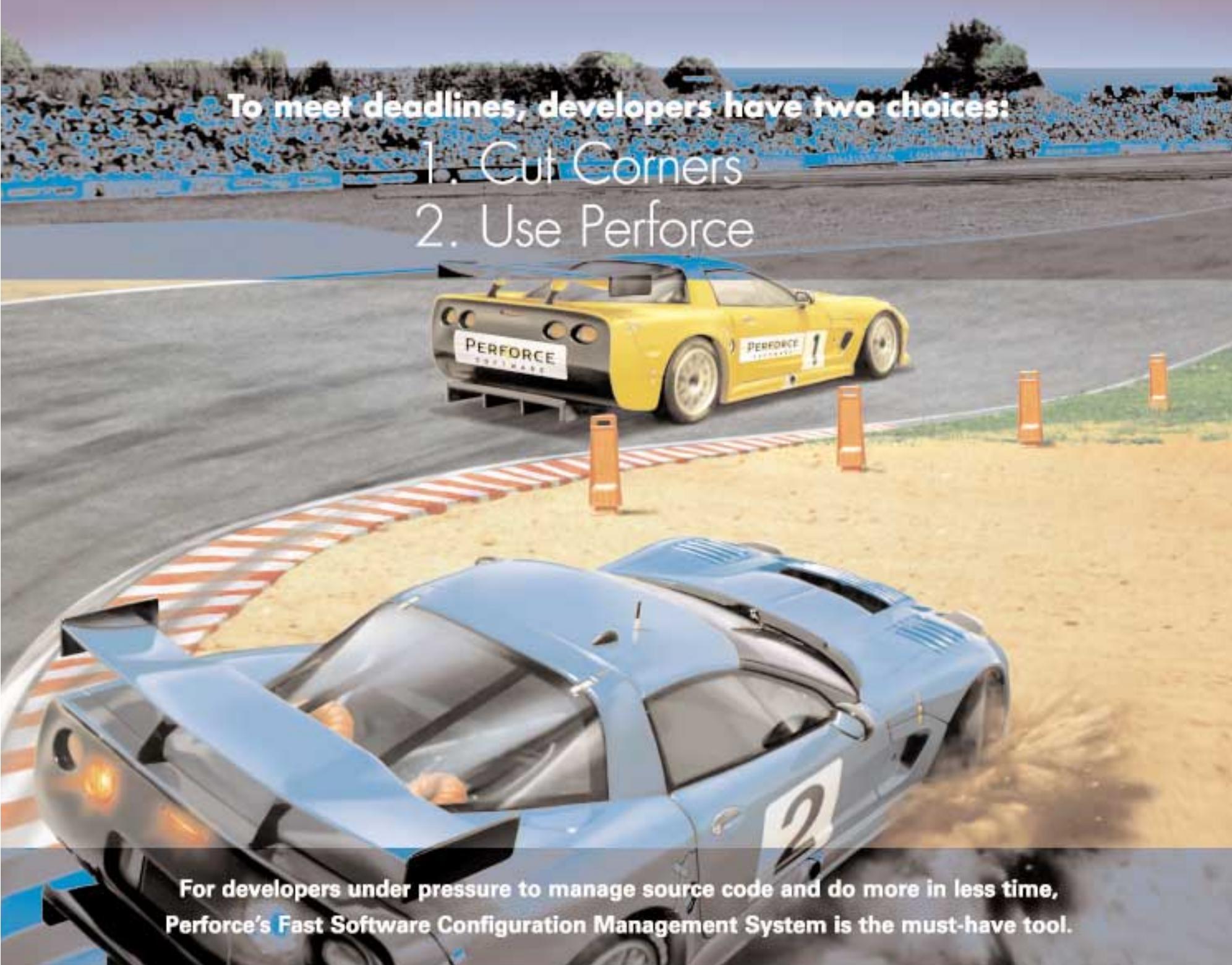
EVANS DATA WATCH

With the ever-growing number and complexity of developer tools, platforms and runtime environments, it's only natural that developers would occasionally need help using these products. Evans Data Corp.'s Developer Relations Programmers Survey, conducted earlier this year, asked developers to name the three features of a developer relations program that they would like best.

The preferences were clear, with three out of five developers rating e-mail-based support and product documentation as the most important elements to include in such a program. Nearly as many wanted to have access to live telephone tech support.

What did the worst? By far, contests weren't seen as particularly useful features. Neither were co-operative marketing programs, typically targeted at ISVs.

Source: Developer Relations Programmers Survey, 2002 ©Evans Data Corp.
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